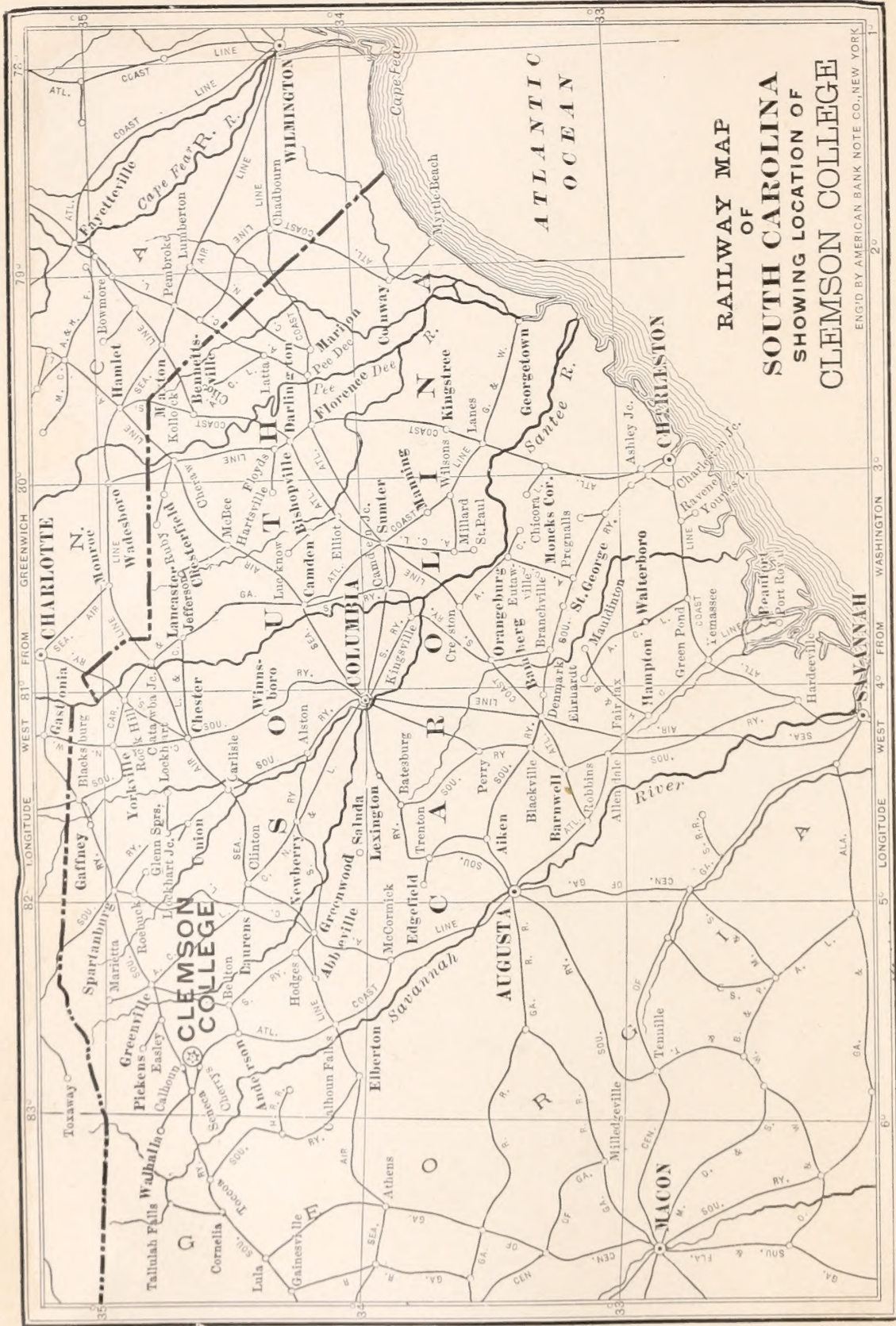


CLEMSON UNIVERSITY LIBRARY





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RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE

ENG'D BY AMERICAN BANK NOTE CO., NEW YORK

CATALOGUE
OF THE
CLEMSON
AGRICULTURAL COLLEGE
OF SOUTH CAROLINA

STATE AGRICULTURAL AND MECHANICAL COLLEGE

POSTOFFICE: CLEMSON COLLEGE

TELEGRAPH, EXPRESS AND FREIGHT OFFICES: CALHOUN

1906-1907
FOURTEENTH YEAR

ANNOUNCEMENTS 1907-1908

Columbia, S. C.
THE R. L. BRYAN COMPANY
1907

1906-1910

1907

JULY							SEPTEMBER							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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JANUARY												MARCH												MAY											
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College Calendar

Session 1907—1908

1907.

- Sept. 11-16. Examinations for admission and for removal of conditions.
Sept. 11. Opening of the 15th session; exercises begin at 8.40 A. M.
Nov. 28. Thanksgiving Day: a holiday.
Dec. 23. First day of Christmas recess.

1908.

- Jan. 3. Beginning of the second term, 8.40 A. M.
Jan. 19. Lee's birthday; annual public exercises of the Columbian literary society in the evening.
Feb. 22. Washington's birthday: a holiday.
Annual public exercises of the Palmetto literary society in the evening.
Feb. 25. Stated meeting of the Board of Trustees.
Mar. 18. Calhoun's birthday: a holiday.
Annual public exercises of the Calhoun literary society in the evening.

1908.

- Mar. 16. Beginning of the third term, 8.40 A. M.
May 1. A holiday.
Annual track and field athletic contests.
June 7. Beginning of commencement exercises; baccalaureate sermon.
June 8. Address of alumni orator.
Contest of literary society representatives.
Military exercises and graduation parade.
June 9. Commencement day; address to the graduating class.
Graduating exercises; delivery of diplomas.
June 14. Stated meeting of Board of Trustees.

Reports to Parents

Reports of class standing and discipline will be sent to parents for periods ending on the following dates:

Oct. 25, and Dec. 13,* 1907; Feb. 7, Mar 6,* April 17, and May 29,* 1908. Dates marked with an asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

Quarterly Dues

Payable Sept. 11, Nov. 13, 1907; Jan. 27, April 1, 1908.

Board of Trustees

Life Members

HON. R. W. SIMPSON, President.....Pendleton, Anderson Co.
 SENATOR B. R. TILLMAN.....Trenton, Edgefield Co.
 HON. R. E. BOWEN.....Easley, Pickens Co.
 HON. J. E. BRADLEY*.....Troy, Abbeville Co.
 HON. M. L. DONALDSON.....Greenville, Greenville Co.
 HON. J. E. WANNAMAKER.....St. Matthews, Orangeburg Co.
 HON. ALAN JOHNSTONE.....Newberry, Newberry Co.

Term Expires 1908

HON. ROBERT ALDRICH.....Barnwell, Barnwell Co.
 HON. JESSE H. HARDIN.....Chester, Chester Co.
 HON. G. DUNCAN BELLINGER.....Columbia, Richland Co.

Term Expires 1912

HON. W. D. EVANS.....Cheraw, Marlboro Co.
 HON. L. A. SEASE.....Prosperity, Newberry Co.
 HON. IVY M. MAULDIN.....Pickens, Pickens Co.

*Deceased.

Standing Committees of the Board

Executive Committee

Messrs. Donaldson, Aldrich, Bowen, Bradley, Johnstone.

Finance Committee

Messrs. Simpson, Donaldson, Johnstone, Mauldin.

Committee on Fertilizer Control

Messrs. Evans, Aldrich, Wannamaker, Bellinger, Tillman.

Experiment Station Committee

Messrs. Tillman, Aldrich, Wannamaker, Donaldson, Evans.

Farmers' Institute Committee

Messrs. Johnstone, Sease, Donaldson, Evans, Tillman, Simpson.

Entomological Inspection Committee

Messrs. Sease, Donaldson, Wannamaker, Mauldin.

Veterinary Inspection Committee

Messrs. Johnstone, Evans, Bowen, Bellinger, Mauldin.

Committee on Coast Experiments

Messrs. Wannamaker, Evans, Aldrich, Tillman, Donaldson.

Board of Visitors for the Session 1907—1908

Meeting First Wednesday in May.

FIRST DISTRICT—Hon. Huger Sinkler, Charleston.

SECOND DISTRICT—Hon. G. L. Toole, Aiken.

THIRD DISTRICT—Hon. Chas. H. Carpenter, Pickens.

FOURTH DISTRICT—Hon. Thos. P. Cothran, Greenville.

FIFTH DISTRICT—Hon. J. G. Richards, Jr., Liberty Hill.

SIXTH DISTRICT—Hon. R. P. Hamer, Jr., Hamer.

SEVENTH DISTRICT—Hon. T. G. Fraser, Sumter.

Faculty*

PATRICK HUES MELL, Ph. D., LL. D.
President.

Agricultural Department

JOSEPH NELSON HARPER, B. S., M. Agr.
Director of Department.
Professor of Agriculture.

FRED HARVEY HALL CALHOUN, Ph. D.
Professor of Geology and Mineralogy.

CHARLES CARTER NEWMAN
Associate Professor of Horticulture.

CHARLES EDWARD CHAMBLISS, B. S., M. S.
Associate Professor of Zoology and Entomology.

LOUIS AMOS KLEIN, V. M. D.
Associate Professor of Veterinary Science.

JOHN MICHELS, M. S.
Associate Professor of Animal Husbandry and Dairying.

CLIFFORD LEWIS NEWMAN, M. S.
Associate Professor of Agriculture.

HOMER DOLIVER HOUSE, B. S., M. A.
Associate Professor of Botany and Bacteriology.

JUNIUS MILTON BURGESS, B. S.
Assistant in Animal Husbandry and Dairying.

M. RAY POWERS, D. V. S.
Assistant in Veterinary Science.

*The names of the Faculty, after that of the President, are arranged in groups in each department: Professors, Associate Professors, Assistant Professors, and Instructors, in the order of their respective appointments.

Mechanical and Electrical Department

WALTER MERRITT RIGGS, E. M. E.,
Director of Department,
Professor of Mechanical and Electrical Engineering.

SAMUEL BROADUS EARLE, A. M., M. E.
Associate Professor of Mechanical Engineering.

THOMAS GRAYSON POATS, M. E., E. E.
Associate Professor of Physics.

RUDOLPH EDWARD LEE, B. S.,
Associate Professor of Drawing.

JOHN HILLIARD HOOK, B. S.
Assistant Professor of Wood-work.

WILLISTON WIGHTMAN KLUGH, B. S.
Assistant Professor of Drawing.

FRANK TOWNES DARGAN, M. S.
Assistant Professor of Electricity.

JOHN WEEMS GANTT
Assistant Professor of Forge and Foundry.

STYLES TRENTON HOWARD, B. M. E.
Assistant Professor of Machine-work.

FRANK BOGARD, B. M. E.
Instructor in Drawing.

ANDREW BURCHELL GARDNER
Assistant in Wood-work.

Department of Chemistry

MARK BERNARD HARDIN
Director of Department,
Professor of Chemistry.

RICHARD NEWMAN BRACKETT, A. B., Ph. D.
Associate Professor of Chemistry.

FRANK SCOTT SHIVER, Ph. G.
Assistant Professor of Agricultural Analysis.

DAVID HILL HENRY, B. S.
Assistant Professor of Chemistry.

Department of Textile Industry

CHARLES STEBBINS DOGETT

Director of Department,
Professor of Textile Chemistry and Dyeing.CLAUDE WIGHTMAN McSWAIN, B. S.
Assistant Professor of Weaving and Designing.DRAYTON EUGENE EARLE, B. S.
Assistant Professor of Carding and Spinning.

Academic Department

CHARLES MANNING FURMAN, A. B.
Professor of English.WILLIAM SHANNON MORRISON, A. B.
Professor of History and Political Economy.PAUL THOMAS BRODIE, B. S., A. B.
Professor of Mathematics and Civil Engineering.DAVID WISTAR DANIEL, M. A.
Associate Professor of English.SAMUEL MANER MARTIN, B. S.
Associate Professor of Mathematics.AUGUSTUS SHANKLIN, B. S.
Registrar and Secretary of the Faculty,
Assistant Professor of Mathematics.THOMAS WADLINGTON KEITT
Assistant Professor of English.ARTHUR BUIST BRYAN, B. S., B. Litt.
Assistant Professor of English.HALE HOUSTON, C. E.,
Assistant Professor of Applied Mathematics in Civil Engineering.JOSEPH EVERETT HUNTER, B. S.
Assistant Professor of Mathematics.MARK EDWARD BRADLEY, A. B.
Assistant Professor of English.BURR HARRISON JOHNSTONE, A. B.
Assistant Professor, teaching Mathematics, German and French.

CLEMSON COLLEGE

Military Department

CHARLES DONALD CLAY

Captain U. S. Army, Retired, Commandant of Cadets,
Professor of Military Science and Tactics.

Preparatory Department

ALESTER GARDEN HOLMES

Instructor in English, History and Geography.

The following members of the Collegiate Faculty also instruct the
Preparatory Class in the subjects indicated:

PROFESSOR MORRISON, History.

ASSISTANT PROFESSOR KEITT, English.

ASSISTANT PROFESSOR BRYAN, English

ASSISTANT PROFESSOR BRADLEY, English.

ASSISTANT PROFESSOR JOHNSTONE, Mathematics.

Standing Committees of the Faculty

The President is *ex officio* a member of each committee.

The first named in each instance is chairman.

Discipline Committee

President Mell, Professors Hardin, Furman, Morrison, Brodie, Riggs,
Calhoun, Clay, Harper, Doggett.

Committee on Examinations

Professors Brodie, Furman, Morrison, Riggs, Calhoun.

Schedule Committee

Professors Morrison, Brackett, Furman, Riggs, Lee, Brodie, Clay,
Doggett, Harper.

Library Committee

Professors Chambliss, Bryan, Calhoun, Doggett, Earle, Henry.

Committee on Preparatory Department

Professors Furman, Morrison, Brodie, Calhoun.

Committee on Irregular Students

Professors Chambliss, Lee, Houston, Klugh, Newman, C. L.

Committee on Chapel Services

Professors Earle, Shiver, Lee, Keitt, Bradley.

Committee on Chapel Music

Professors Riggs, Hook, Bryan.

Committee on Lectures and Entertainments

Professors Daniel, Martin, Klugh, Houston, Dargan.

Committee on Extension Work

Professors Chambliss, Daniel, Calhoun, Klein, Earle.

Committee on Alumni

Professors Shanklin, Lee, Henry.

Committee on Athletics

Professors Riggs, Daniel, Shanklin, Calhoun, Gantt, Poats.

Catalogue Committee

Professors Earle, Brackett, Houston, Clay, Klein, McSwain.

Museum Committee

Professors Calhoun, Chambliss, House.

Students Publication Committee

Professors Keitt, Bradley.

Officers of the College

PATRICK HUES MELL, Ph. D., LL. D.
President.

CHARLES DONALD CLAY
Captain U. S. Army, Retired,
Commandant.

ALEXANDER MAY REDFERN, B. S., M. D.
Surgeon.

AUGUSTUS SHANKLIN
Registrar and Secretary of Faculty.

PAUL HAMILTON EARLE SLOAN, M. D.
Treasurer and Secretary Board of Trustees.

HUGH MILTON STACKHOUSE
Secretary Board of Fertilizer Control.

GEORGE EDWIN TAYLOR*
Bookkeeper.

BEN CURTIS HARD**
Bookkeeper.

WILLIAM CALVIN TUCKER
Assistant Bookkeeper.

MISS KATHERINE BOCQUET TRESCOT
Librarian.

MISS MINNIE BATES WANNAMAKER.
Secretary to the President.

MISS HELEN BRADFORD
Stenographer to Agricultural Department.

JOHN NATHAN HOOK
Justice Clemson College Corporation.

JAMES PERCIVAL LEWIS
Superintendent of College Farm.

AUGUST SCHILLETTER
Steward.

SYLVANUS HAMILTON PREVOST
Assistant to Commandant.

J. S. GOODMAN
In Charge of Construction and Repairs.

Board of Health

President MELL., Doctors REDFERN and SLOAN, Professors
HARDIN and HARPER.

*Deceased.

**In place of G. E. Taylor.

Experiment Station Council

- P. H. MELL, Ph. D., LL. D., *President of College.*
J. N. HARPER, B. S., M. Agr., *Director Agriculture.*
M. B. HARDIN, *Chief Chemist.*
C. C. NEWMAN, *Horticulture.*
C. E. CHAMBLISS, M. S., *Entomology and Zoology.*
L. A. KLEIN, V. M. D., *Veterinary Science.*
JOHN MICHELS, M. S., *Animal Husbandry and Dairying.*
C. L. NEWMAN, M. S., *Agriculture.*
F. H. H. CALHOUN, Ph. D., *Geology.*
H. D. HOUSE, A. M., *Botany and Bacteriology.*
F. S. SHIVER, Ph. G., *Chemistry.*
R. N. BRACKETT, Ph. D., *Chemistry.*

Assistants

- J. N. HOOK, *Secretary and Librarian.*
D. H. HENRY, B. S., *Chemistry.*
J. M. BURGESS, B. S., *Herdsmen.*
W. D. GARRISON, B. S., *Foreman of Station Farm.*
MISS HELEN C. BRADFORD, *Stenographer.*
J. M. JENKINS, B. S., *in Charge of Coast Branch Experiment Station.*

Chemists of Fertilizer Control

- C. C. McDONNELL, B. S.,* *Chemistry.*
B. F. ROBERTSON, B. S., *Chemistry.*
W. E. DICKINSON, B. S., *Assistant, Chemistry.*
J. H. MITCHELL, M. S., *Assistant, Chemistry.*
T. E. KEITT, B. S., *Assistant, Chemistry.*

State Control Officers**

- PROFESSOR M. B. HARDIN, *State Chemist.*
PROFESSOR C. E. CHAMBLISS, *State Entomologist.*
DR. L. A. KLEIN, *State Veterinarian.*

*Resigned, to take effect March 15th, 1907.

**Appointed by the Board of Trustees under the State laws requiring them to carry on the work indicated.

Ministers for Session 1906—1907

- Sept. 16. Rev. T. M. McConnell, Camden, S. C.
Sept. 23. Rev. D. M. McLeod, Union, S. C.
Sept. 30. Rev. J. L. McLees, Orangeburg, S. C.
Oct. 7. Rev. J. W. Willis, Rock Hill, S. C.
Oct. 14. Rev. A. R. Mitchell, Greenville, S. C.
Oct. 21. Rev. W. H. Fraser, Anderson, S. C.
Oct. 28. Rev. Mark L. Carlisle, Charleston, S. C.
Nov. 4. Rev. W. M. Steele, Greenville, S. C.
Nov. 11. Rev. A. S. Thomas, Darlington, S. C.
Nov. 18. Rev. G. A. Blackburn, Columbia, S. C.
Nov. 25. Rev. W. W. Daniel, Columbia, S. C.
Dec. 2. Rev. L. M. Rice, Union, S. C.
Dec. 9. Rev. W. E. Callendar, Florence, S. C.
Dec. 16. Rev. Alexander Sprunt, Charleston, S. C.
Jan. 13. Rev. W. I. Herbert, Charleston, S. C.
Jan. 20. Rev. E. C. Bailey, Timmons ville, S. C.
Jan. 27. Archdeacon P. C. Webber, Boston, Mass.
Feb. 3. Rev. S. M. Provence, Tuskegee, Ala.
Feb. 10. Rev. S. E. Prentiss, Abbeville, S. C.
Feb. 17. Rev. W. L. Lingle, Rock Hill, S. C.
Feb. 24. Rev. S. M. Henry, Pendleton, S. C.
Mar. 3. Rev. Z. T. Cody, Greenville, S. C.
Mar. 10. Rev. L. G. Wood, Charleston, S. C.
Mar. 17. Rev. M. R. Kirkpatrick, Seneca, S. C.
Mar. 24. Rev. R. E. Stackhouse, Rock Hill, S. C.
Mar. 31. Rev. J. A. B. Scherer, Newberry, S. C.
Apr. 7. Rev. A. J. S. Thomas, Greenville, S. C.
Apr. 14. Rev. K. G. Finlay, Clemson College, S. C.
Apr. 21. Rev. F. E. Gillespie, Yorkville, S. C.
Apr. 28. Rev. J. W. Heidt, Atlanta, Ga.
May 5. Rev. H. H. Covington, Sumter, S. C.
May 12. Rev. W. C. James, Russellville, Ky.
May 19. Rev. Robert Adams, Laurens, S. C.
May 26. Rev. H. W. Bays, Sumter, S. C.
June 2. Rev. L. M. Roper, Spartanburg, S. C.
June 9. Baccalaureate Sermon, Rev. R. D. Smart, Charlottesville, Va.

Regimental Organization

FEBRUARY 18TH, 1907.

Commandant of Cadets

CAPTAIN CHARLES DONALD CLAY,
UNITED STATES ARMY, RETIRED.

Regimental Staff

S. R. Perrin.....*Captain and Adjutant*
F. M. Furtick.....*Captain and Quartermaster*
J. W. McLendon.....*First Lieutenant and Assistant Quartermaster*

Non-Commissioned Staff

C. A. McLendon.....*Sergeant Major*
F. P. Caughman.....*Quartermaster Sergeant*
D. N. Harris.....*Color Sergeant*
L. O. Watson.....*Color Sergeant*

Hospital Corps

R. A. Easterling*Captain*
J. W. Keel.....*First Lieutenant*

First Battalion

MAJOR A. S. HEYWARD

Adjutant.

C. WOODS WANNAMAKER.

Sergeant Major.

J. M. BRYAN.

COMPANY "E"

COMPANY "F"

COMPANY "G"

COMPANY "H"

Captains

W. A. Latimer⁸

W. H. Stevens⁴

E. D. McCutchan¹

A. M. Klugh⁷

Lieutenants

A. V. Hooks¹

R. E. Dalton⁶

T. D. Eason⁶

O. M. Reid⁴

G. R. Jones²

J. B. Bailey¹

P. L. Howle⁵

H. C. Crum³

First Sergeants

J. Spratt

A. G. Kennedy

M. L. Sandifer

W. M. Lunn

Sergeants

J. E. Alverson

M. H. Ackerman

A. C. Lee

F. J. Crider

M. R. Kimbrell

W. P. Gee

C. W. Busch

C. W. Rice

C. C. Johnson

J. B. Simpson

W. D. Simpson

C. McLaurin

H. L. Rivers

J. N. Napier

E. H. Shuler

Corporals

J. Wylie

J. C. Harrison

O. M. Clark

C. M. Wootan

J. N. McLaurin

T. L. Brice

K. McLaurin

M. L. Tyler

S. Coles

J. P. McMillan

L. P. Byars

B. F. Ballew

S. O. Kelley

W. G. Dominick

E. E. Gary

S. O. Pegues

H. W. McIver

A. B. Craig

A. K. Folger

C. H. Goldsmith

T. H. Yeargin

J. C. Reid

Second Battalion

MAJOR W. P. SLOAN

Adjutant.

L. S. HORTON.

Sergeant Major.

J. C. LITTLEJOHN.

COMPANY "A"

COMPANY "B"

COMPANY "C"

COMPANY "D"

*Captains*E. B. Plenge³E. A. Crawford⁵R. R. Tolbert⁶F. M. Stephenson²*Lieutenants*H. P. Lykes³
G. H. Folk²A. B. Taylor⁷
W. L. Stone⁷B. D. Carter⁴
P. W. Spencer⁵H. W. Moore⁸
J. J. Brown⁸*First Sergeants*

T. C. Heyward

F. L. Martin

L. C. Boone

D. L. Tindal

*Sergeants*W. M. Rosborough
W. O. Pratt
G. M. Truluck
W. H. RumffH. C. Wilburn
W. A. Thomas
R. O. Poag
E. S. KohnC. L. Cannon
C. L. Stevens
M. G. Williams
A. C. SummersT. S. Allen
J. W. Lewis
J. A. Phillips
N. A. Lykes*Corporals*E. C. Martin
C. E. Baldwin
J. T. Folk
T. Fulmer
A. C. Hunter
R. T. GastonL. B. Brandon
H. K. Sanders
J. O. Graham
J. H. Wilson
S. Jordan
W. J. SheelyW. L. Nance
C. P. Norris
W. G. Hyne
J. C. Pridemore
B. L. ParnellB. E. Wolff
G. E. Lachicotte
T. B. Reeves
L. Gardner
J. L. Dove
W. A. Robinson

Detachment "I"

S. H. Sherard.....*First Sergeant**Sergeants*

H. H. Brunson

F. G. Tarbox

*Corporals*L. H. Butler
E. D. ClementJ. J. Gantt
H. C. Twigg

Cadet Band

W. L. Schachte, *First Lieutenant and Chief Musician*

A. T. Beaver, *Drum-Major*

C. M. Trott, *Sergeant*

T. L. Bissell, *E b Clarinet*

G. L. Wilson, *B b Clarinet*

W. K. Tavel, *Solo Cornet*

V. B. Higgins, *2d Cornet*

E. P. Porcher, *2d Cornet*

W. L. Schachte, *1st Trombone*

L. D. Webb, *2d Trombone*

C. M. Trott, *1st Alto*

J. M. Wylie, *2d Alto*

N. E. Byrd, *3d Alto*

E. H. Pinckney, *3d Alto*

C. W. Mack, *Baritone*

W. H. Wylie, *Snare Drum*

E. P. Crouch, *Bass*

T. N. Bristow, *Bass*

C. W. Marston, *Bass Drum*

LOCATION AND HISTORICAL SKETCH
ADMISSION AND COURSES OF STUDY

Location

The College is located on the old Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foot-hills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly 5,000 feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is also connected by local telephone with neighboring towns in adjoining counties, and by telegraph and long distance telephone with all parts of the country. The post office is conveniently situated on the campus, and receives five daily mails.

Historical Sketch

The College is the outcome of a movement for the establishment of an Agricultural College by a convention of farmers of the State in 1886. The first step toward the realization of this project was taken by the Hon. Thomas G. Clemson, who, upon his death in 1888, bequeathed to the State the old Fort Hill homestead, the former home of John C. Calhoun, and other securities to the value of \$58,539, "for the establishment of an Agricultural College." The estate included about 800 acres of land and the historic old Calhoun residence, which is now carefully preserved on the College campus. This bequest was accepted by the State Legislature in an Act which became a law in November, 1889.

The College was opened on the 6th day of July, 1893, and 446 students were enrolled during the first session. These were classified as sophomores, freshmen, and higher and lower preparatory. The Trustees having decided that sessions should begin on the third Thursday in February and end on the third Thursday in December, the first session was only about five and a half months long. On this account the students were continued in the same classes throughout the second session, February to December, 1894, and the enrollment increased to 635. On the night of May 22d, 1894, the Main building was burned, but the regular exercises were not interrupted, and the only summer vacation consisted of a week's encampment at Spartanburg in July.

During the third session, February to December, 1895, there were 370 students in attendance, with the former sophomores advanced to the junior class. There was a recess of two weeks in the latter part of July, and the session was closed on December 7th. The enrollment during the fourth session, February to December, 1896, was 350, and the first commencement exercises were held on December 13th to 16th, 1896, with a graduating class of 37, 15 in the agricultural course and 22 in the mechanical-electrical. The fifth session opened in the regular way, on the third Thursday in February, 1897. At a meeting of the Trustees in July, it was decided to open the College on the 14th of September, and that henceforth the sessions should begin regularly on the second Wednesday in September and close on the second Wednesday in June. The exercises of the second commencement, which would normally have occurred in December, 1897, were held on February 6th to 9th, 1898. The graduating class numbered 25, 13 in the agricultural course and 12 in the mechanical-electrical. The undergraduate classes were continued until June, and the total enrollment for this long session (February, 1897, to June, 1898), was 449. It

will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, although the closing day was afterward changed to first Tuesday, instead of second Wednesday. During the sixth session, 1898-1899, the enrollment was 446, and the graduating class numbered 16, 6 in the agricultural course, 6 in the mechanical-electrical, and 4 in the civil engineering. The textile department was first opened for students at the beginning of this session, in September, 1898. During the seventh session, 1899-1900, 461 students matriculated, and the class of 1900 numbered 28, including 12 in the agricultural course, 6 in the mechanical-electrical, 6 in the civil engineering, and 4 in the textile.

Beginning with the eighth session, 1900-1901, preparatory instruction was restricted to a one-year course, thus abolishing the lower preparatory class. During the session 483 students were enrolled, and the graduating class numbered 31, including 9 in the agricultural course, 11 in the mechanical-electrical, 2 in the civil engineering, and 9 in the textile. In the ninth session, 1901-1902, 500 students matriculated and 59 were graduated, including 12 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 17 in the textile. The enrollment during the tenth session, 1902-1903, was 539, and the graduating class numbered 60, including 6 in the agricultural course, 28 in the mechanical-electrical, 5 in the civil engineering, and 21 in the textile.

In the eleventh session, 1903-1904, 605 students were enrolled, and the graduating class numbered 39, including 4 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 5 in the textile.

A gold medal was awarded to the mechanical, electrical, civil and textile exhibit at the St. Louis Exposition.

A bronze medal was awarded to the agricultural department for the preservation of the sweet potato.

In the twelfth session, 1904-1905, 673 students were enrolled, and the graduating class numbered 39, including 5 in the agricultural course, 20 in the mechanical-electrical, 8 in the civil, 5 in the textile, and 1 in the metallurgical course.

In the thirteenth session, 1905-1906, 652 students were enrolled, and the graduating class numbered 59, including 16 in the agricultural course, 20 in the mechanical-electrical, 15 in the civil, and 8 in the textile course.

The total number of graduates to June, 1906, was 393.

Admission of Students

Every candidate for admission must be at least sixteen years of age.

Students desiring to enter the College should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 15th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate come from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College, subject to their passing the required examinations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases, including consumption.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

- (a). Applicants prepared to enter College classes will

have preference over those who enter only the preparatory class.

(b). As between applicants of equal preparation, the oldest will have the preference.

(c). Other things being equal, the first applicants will receive permission to enter.

(d). When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e). Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other States may be admitted, and when so admitted, may continue in College until they complete their course.

(f). Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the President's office and matriculate before they will be assigned to quarters in the barracks. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of the fees. (See page 52).

Matriculation is equivalent to a pledge to conform to the rules and regulations of the College.

Entrance Requirements

For admission into the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography, and history of the United States.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with the ordinary principles and operations of arithmetic. Wentworth's Practical Arithmetic is recommended as a suitable text-book.

Algebra.—The detailed requirements are as follows: Definitions and notation, fundamental operations, including laws of signs, and the interpretation of negative results;

use of parentheses; factoring; highest common factor; lowest common multiple; single and complex fractions; simple integral and fractional equations with one unknown number, and problems leading to such equations; simultaneous equations of the first degree, with applications to solution of problems; involution of monomials, and polynomials; evolution of monomials and polynomials; theory of exponents with applications; radicals, including solution of equations involving rationalization; simple operations with imaginary expressions; pure and affected quadratic equations containing one unknown number, with application to problems.

The student should cover carefully the whole ground here specified, and should acquire a clear understanding not only of algebraic processes, but of the principles and reasons involved in every operation. Students fail on entrance examinations more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book.

A satisfactory treatment of the topics in Algebra may be found in Wentworth's New School Algebra (used in the public schools).

English.—Applicants are examined in spelling, sentence analysis, and oral reading; and are required to write short essays on an assigned subject.

Geography.—Applicants must possess a fair knowledge of general geography, such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography, or other standard text-book of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and positions of the continents, and locations of the principal mountains, plateaus, river basins, and coastal lowlands; influences of land forms and climate upon the life and industries of the inhabitants; locations and outlines of

important countries, particularly those of America and Europe, and of the States in the United States; locations of great cities in all countries, and conditions favorable to the growth of cities.

History.—A School History of the United States, by White, is the text-book recommended. Any other school history may be used in place of the one named.

Entrance Examinations

Entrance examinations are held during the first week of the opening of the session, September 11th to 16th, 1907, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules, beginning at 9 A. M.:

For Admission to the Freshman Class.

Arithmetic, Wednesday, September 11th, 1907.

Algebra, Thursday, September 12, 1907.

English, Friday, September 13th, 1907.

Geography, Saturday, September 14, 1907.

History, Monday, September 16th, 1907.

For Admission to the Preparatory Class.

Arithmetic, Wednesday, September 11th, 1907.

English, Thursday, September 12th, 1907.

Geography, Friday, September 13th, 1907.

Upon passing satisfactorily the required examinations, the Committee on Examinations furnishes the applicant with a certificate to that effect, and upon presentation of this certificate at the President's office he is assigned to the class recommended by the Committee.

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled on the following pages. Such applicants should report with other new students during the regular examination period, and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

Examinations for admission into the beneficiary scholarships established at the recent session of the Legislature are held by the various county boards of education, and cannot be given at the College. For further particulars in regard to these scholarships, see page 53.

Prescribed Courses of Study

As briefly described and tabulated on the following pages, six regular four-year courses are offered, each leading to graduation with the degree of Bachelor of Science (B. S.), the course pursued being designated on the diploma.

The two agricultural courses are alike in the freshman year, and agricultural students are, therefore, required to choose between these at the beginning of the sophomore year. The other four courses are alike during the first two years, and choice between them is made at the beginning of the junior year. The descriptions accompanying the detailed schedules of studies in the various courses are intended to aid the student in arriving at an adequate estimate of the scope and purposes of each course, in order that he may the more intelligently choose between them.

In all the courses, two hours of practical work in shop, laboratory, or field, are regarded as equivalent to one hour of "theoretical" work, or recitations, as no outside prepara-

tion is required for practical work, and the exercises are completed in the periods assigned in the curriculum.

Change from one course to another is not permitted except upon approval of the Faculty. Any student desiring to change his course of study must submit a written application to the President for such change within thirty days from the date of his matriculation for the current session.

When change is made at beginning of sophomore year, from one of the engineering courses to the agricultural course or from the agricultural to one of the engineering courses, the student is required to make up the equivalent of three practical hours per week for a year in whatever subject the director of the department shall specify.

COURSE I.—AGRICULTURE

This is a broad educational course, covering the whole field of natural sciences that are tributary to the agricultural industry, together with a liberal amount of mathematics, English, physics, history and political economy, and a maximum amount of chemistry.

The division of the original course into (1) Agriculture and Horticulture, and (2) Agriculture and Animal Industry, described on the following page, has been made in order to afford opportunity for election in these lines. In this course the student is given more special training in agriculture, horticulture, chemistry, botany, bacteriology, and entomology; and thus is laid a foundation upon which he may readily specialize in any of these branches after graduation. The student is well equipped to take up farming, gardening, or fruit growing as an occupation, or for the pursuit of investigational work in the United States Department of Agriculture or the various state experiment stations.

Either of the agricultural courses forms an excellent foundation for the study of other professions, particularly that of medicine.

COURSE I.—AGRICULTURE

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term....	Second Term..	Third Term....		First Term....	Second Term..	Third Term....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (261).....	3	3	—
English (501).....	5	5	5	Forge Work (242).....	—	—	3
History (511, 512).....	3	3	3	Freehand Drawing (230).....	3	3	3
Agriculture (100).....	2	—	—	Rural Architecture (233).....	3	3	3
Botany (100).....	—	2	2	Agriculture (100).....	3	—	—
				Botany (100).....	—	3	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522).....	5	—	—	Veterinary Science (131).....	—	—	2
English (502).....	3	3	3	Botanical Lab. (171).....	3	2	—
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Surveying Field (530).....	—	2	2
Surveying (530).....	—	2	2	Physiological Lab. (140).....	2	2	—
Physiology (140).....	1	1	—	Agriculture (102).....	2	2	4
Agriculture (101).....	—	1	3	Horticulture (120).....	2	2	2
Horticulture (120).....	1	3	2	Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Rural Engineering (534).....	2	—	—
German (540).....	2	2	2	Chemical Laboratory (303).....	4	4	4
History (513, 514).....	2	2	2	Zoological Lab. (141).....	—	5	—
Chemistry (302).....	2	2	2	Botanical Laboratory (171).....	—	—	3
Rural Engineering (534).....	2	—	—	Agriculture (102, 104).....	3	—	2
Zoology (141).....	—	2	—	Horticulture (121).....	—	3	3
Agriculture (104).....	—	—	4	Dairying (162).....	3	—	—
Horticulture (121).....	2	2	2	Military Drill (602).....	3	3	3
Dairying (161).....	2	2	—				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Chemical Laboratory (305).....	4	4	4
German (541).....	2	2	2	Entomological Lab. (142).....	2	2	2
Political Economy (515).....	3	2*	—	Forestry (172).....	4	—	—
Chemistry (304).....	2	2	2	Bacteriological Lab. (174).....	—	2	4
Geology (112).....	2	3	1	Agriculture (107).....	2	2	2
Entomology (142).....	—	3	2	Horticulture (122).....	2	—	—
Bacteriology (173).....	—	—	2	Mineralogy (117).....	—	2	—
Agriculture (105, 106).....	2	2	2	Military Drill (602).....	3	3	3
Stock Feeding (156).....	3	—	—				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE Ia.—AGRICULTURE AND CHEMISTRY

This is a differentiation of the original Course in Agriculture for the purpose of affording students specially interested in Chemistry, Mineralogy and Bacteriology an opportunity to receive more instruction in these subjects than is offered by the other Agricultural Courses. There is a growing demand for well-trained chemists, and the students who propose to select the profession of chemistry will find that this course is well arranged to give them a good foundation in the science and at the same time furnish them a liberal education.

COURSE IA—AGRICULTURE AND CHEMISTRY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week			Hours per week		
	Third Term....	Second Term....	First Term....	First Term....	Second Term....	Third Term....
THEORETICAL						
Mathematics (520, 521).....	5	5	5	3	3	—
English (501).....	5	5	5	3	3	3
History (511, 512).....	3	3	3	3	3	3
Agriculture (100).....	2	—	—	3	3	3
Botany (100).....	—	2	2	—	—	3
PRACTICAL						
Woodwork (261).....	—	—	—	3	3	—
Freehand Drawing (230).....	—	—	—	3	3	3
Rural Architecture (233).....	—	—	—	3	3	3
Agriculture (100).....	—	—	—	3	3	3
Forge Work (242).....	—	—	—	—	—	3
Military Drill (602).....	—	—	—	3	3	3

Sophomore Class

Mathematics (522).....	5	—	—	Veterinary Science (131).....	—	—	2
English (502).....	3	3	3	Botanical Lab. (171).....	3	2	—
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Surveying Field (530).....	—	2	2
Surveying (530).....	—	2	2	Physiological Lab. (140).....	2	2	—
Physiology (140).....	1	1	—	Agriculture (102).....	2	2	4
Agriculture (102).....	—	1	3	Horticulture (120).....	2	2	2
Horticulture (120).....	1	3	2	Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Mineralogy (111).....	2	2	2
German (540).....	2	2	2	Rural Engineering (534).....	2	2	—
History (513, 514).....	2	2	2	Chemical Laboratory (303).....	6	6	6
Chemistry (302).....	2	2	2	Agriculture (103, 104).....	2	—	2
Rural Engineering (534).....	2	2	—	Horticulture (121).....	—	2	2
Mineralogy (111).....	2	2	2	Military Drill (602).....	3	3	3
Agriculture (103, 104).....	—	—	4				
Horticulture (121).....	2	2	—				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Chemical Laboratory (305)....	6	6	6
German (541).....	2	2	2	Forestry (172).....	4	—	—
Political Economy (515).....	3	2*	—	Bacteriological Lab. (173).....	—	2	4
Chemistry (304).....	2	2	2	Agriculture (117).....	2	2	2
Geology (112).....	2	3	1	Horticulture (122).....	—	2	—
Forestry (172).....	2	—	—	Military Drill (602).....	3	3	3
Bacteriology (173).....	1	3	4				
Agriculture (105).....	2	2	2				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE II.—AGRICULTURE AND ANIMAL INDUSTRY

This is a differentiation of the original course in agriculture for the purpose of affording students specially interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential studies, have been omitted; but mathematics is retained through the second year and a special course in rural engineering put in the third year. English, history and civics are retained throughout the course, drawing the first year, physics the second year, geology the last year and chemistry the last three years, but slightly reduced and changed to meet the demands of this new course. Botany, bacteriology, zoology and entomology are so planned as to begin the first year of the course and thereby contribute to clearer knowledge of farm crops, live stock, dairying, sanitation and animal diseases. General agriculture is taught during the first two years, horticulture the third and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breeds of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding, care and management of flocks and herds. In the dairy course are taken up the production, handling, manufacture and marketing of whole milk, cream, ice-cream, butter and cheese.

COURSE II.—AGRICULTURE AND ANIMAL INDUSTRY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term....	Second Term..	Third Term....		First Term....	Second Term..	Third Term....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (261).....	3	3	—
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Rural Architecture (233).....	3	3	3
Agriculture (100).....	2	—	—	Agriculture (100).....	3	—	—
Botany (100).....	—	2	2	Botany (100).....	—	3	3
				Forge Work (242).....	—	—	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522).....	5	—	—	Veterinary Science (130).....	—	2	2
English (502).....	3	3	3	Chemical Laboratory (301).....	3	2	2
Chemistry (300).....	3	3	3	Botanical Lab. (171).....	3	—	—
Physics (220).....	2	2	2	Surveying Field (530).....	—	2	2
Surveying (530).....	—	2	2	Physiological Lab. (140).....	2	2	—
Physiology (140).....	1	1	—	Agriculture (102).....	2	2	4
Agriculture (101).....	—	1	3	Live Stock (154).....	2	2	2
Live Stock (152, 153).....	1	3	2	Military Drill (602).....	3	3	3

Junior Class

English (453).....	2	2	2	Chemical Laboratory (303).....	4	4	4
German (540).....	2	2	2	Zoological Lab. (141).....	—	—	4
History (513, 514).....	2	2	2	Horticulture (120, 121).....	2	2	2
Chemistry (302).....	2	2	2	Dairying (163).....	3	4	—
Zoology (141).....	—	—	4	Veterinary Science (133, 134).....	—	2	2
Horticulture (120, 121).....	2	2	—	Agriculture (102).....	3	—	—
Dairying (161).....	2	2	—	Military Drill (602).....	3	3	3
Veterinary Science (132).....	2	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Chemical Laboratory (305).....	3	3	3
German (541).....	2	2	2	Entomological Lab. (142).....	3	3	—
Political Economy (515).....	3	2*	—	Bacteriological Lab. (173).....	—	2	4
Chemistry (304).....	2	2	2	Live Stock (159).....	3	3	—
Geology (112).....	2	3	1	Veterinary Science (138).....	3	3	3
Bacteriology (173).....	—	—	2	Military Drill (602).....	3	3	3
Stock Feeding (157, 158, 160).....	2	2	2				
Veterinary Science (135-6-7).....	3	3	2				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

CLEMSON UNIVERSITY

COURSE III.—CHEMISTRY AND GEOLOGY

This course is intended to equip the student for engaging in manufacturing, operations involving metallurgy or other branches of inorganic chemistry, or for employment as assayer or chemist in connection with mining operations. It also furnishes a basis upon which he may readily specialize in mining or geology, with a view to conducting actual mining enterprises or to employment in responsible positions on state or national surveys.

The student is well grounded in the principles of chemistry, physics, mechanics, geology and mineralogy, but the principal stress is laid on geology and metallurgical chemistry. He also acquires valuable practical knowledge of surveying, mechanical engineering, foundry practice, drawing and designing, in addition to the pursuit of courses in English, history, political economy, and other subjects of general educational value.

The first two years of the course are the same as in the engineering courses. The third and fourth years differ chiefly in the substitution of advanced work in chemistry and metallurgy and in geology and mineralogy for the higher mathematics and technical engineering work.

For further particulars see the detailed descriptions of subjects tabulated on the opposite page.

COURSE III.—CHEMISTRY AND GEOLOGY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term....	Second Term..	Third Term....		First Term....	Second Term..	Third Term....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (260).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (232).....	3	3	3
Agriculture (101).....	2	2	2	Forge Work (240).....	3	3	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522-4-5).....	5	3	3	Foundry (241).....	2	3	3
English (502).....	3	3	3	Pattern Making (262).....	2	3	3
History (513, 514).....	2	2	2	Mechanical Drawing (234).....	2	2	2
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Descriptive Geom. (523).....	3	—	—
Surveying (530).....	—	2	2	Surveying Field (530).....	—	2	2
				Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Assaying (303).....	2	2	2
Chemistry (302).....	2	2	2	Chemical Lab. (303).....	4	4	4
Mineralogy (111).....	2	2	2	Mineralogical Lab. (111).....	2	2	2
Geology (113).....	4	4	4	Mechanical Drawing (237).....	2	2	2
Physics (221).....	2	2	2	Physical Lab. (222).....	2	2	2
Mechanism (210).....	2	—	—	Military Drill (602).....	3	3	3
Mechanics (211).....	—	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Chemical and Metallurgical Laboratory (311).....	6	6	6
Political Economy (515).....	3	2*	—	Practical Geol. (116).....	3	3	3
Chemistry (306).....	2	2	2	Mechanical Lab. (215).....	3	3	3
Metallurgy (310).....	2	2	3	Military Drill (602).....	3	3	3
Economic Geology (115).....	2	3	4				
Petrography (114).....	2	2	2				
Mechanical Eng. (213).....	3	3	—				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE IV—MECHANICAL AND ELECTRICAL ENGINEERING

This course is designed to fit young men for responsible positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer cannot be acquired in a college course, but the technically educated graduate usually soon distances his uneducated competitors.

While devoting considerable time to purely technical work, it is recognized that to obtain the best ultimate results, the student should be given a thorough training in the English language and as broad and liberal a culture as the time available and his previous preparation will permit. Seeking in some degree to attain this end, such studies as history, English literature, civics, economics, geology, and botany are taught in the course, as well as the partly technical sciences, mathematics, physics, and chemistry.

Within the department are taught physics, mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in laboratories equipped with the best modern apparatus.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but rather men capable of directing enterprises into which these trades enter as component parts.

The work in drawing is made one of the features of the course, including instruction in freehand drawing in the first year, mechanical drawing during the first three years and machine design in the fourth year.

Graduates from this course are filling responsible positions in various lines of mechanical and electrical engineering and in drawing.

COURSE IV—MECHANICAL AND ELECTRICAL ENGINEERING

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term....	Second Term...	Third Term....		First Term....	Second Term...	Third Term....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (260).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (232).....	3	3	3
Agriculture (101).....	2	2	2	Forge Work (240).....	3	3	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522-4-5).....	5	3	3	Foundry (241).....	2	3	3
English (502).....	3	3	3	Pattern Making (262).....	2	3	3
History (513, 514).....	2	2	2	Mechanical Drawing (234).....	2	2	2
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Descriptive Geom. (523).....	3	—	—
Surveying (530).....	—	2	2	Surveying Field (530).....	—	2	2
				Military Drill (602).....	3	3	3

Junior Class

Mathematics (525-527).....	5	5	5	Mechanical Drawing (235).....	3	3	3
English (503).....	2	2	2	Machine Shop (250).....	3	3	3
Physics (221).....	2	2	2	Physical Lab. (222).....	3	3	3
Electrical Eng. (200).....	3	3	3	Electrical Lab. (201).....	3	3	3
Mechanism (210).....	2	—	—	Military Drill (602).....	3	3	3
Mechanics (211).....	—	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Machine Shop (251).....	3	3	3
Political Economy (515).....	3	2*	—	Machine Design (238).....	3	3	3
Electrical Eng. (202).....	5	5	5	Electrical Lab. (203).....	3	3	3
Mechanical Eng. (213).....	3	3	5	Mechanical Lab. (214).....	3	3	3
Mechanics (212).....	2	2	—	Military Drill (602).....	3	3	3
Geology (112).....	1	2	1				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE V.—CIVIL ENGINEERING

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics and the physical sciences. The course will also be found to embrace the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs, and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water works, and the development of water power.

For fuller details, see descriptions of instruction in these subjects.

COURSE V.—CIVIL ENGINEERING

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term....	Second Term..	Third Term....		First Term....	Second Term..	Third Term....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (260).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (232).....	3	3	3
Agriculture (101).....	2	2	2	Forge Work (240).....	3	3	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522-4-5).....	5	3	3	Foundry (241).....	2	3	3
English (502).....	3	3	3	Pattern Making (262).....	2	3	3
History (513, 514).....	2	2	2	Mechanical Drawing (234a).....	2	2	2
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Descriptive Geom. (523).....	3	—	—
Surveying (530).....	—	2	2	Surveying Field (530).....	—	2	2
				Military Drill (602).....	3	3	3

Junior Class

Mathematics (525-527).....	5	5	5	Mechanical Drawing (236).....	3	3	3
English (503).....	2	2	2	Machine Shop (250).....	3	3	3
Physics (221).....	2	2	2	Physical Lab. (222).....	2	2	—
Civil Engineering (531-3).....	3	3	3	Civil Eng. Field (531-3).....	4	4	3
Mechanism (210).....	2	—	—	Mineralogical Lab. (110).....	—	—	3
Mechanics (211).....	—	2	2	Military Drill (602).....	3	3	3
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Mechanical Drawing (239).....	3	3	3
Political Economy (515).....	3	2*	—	Mechanical Lab. (214).....	3	3	3
Civil Engineering (535-7).....	5	5	5	Civil Eng. Field (535-7).....	6	6	6
Mechanical Eng. (213).....	3	3	5	Military Drill (602).....	3	3	3
Mechanics (212).....	2	2	—				
Geology (112).....	1	2	1				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE VI.—TEXTILE INDUSTRY

This department was established primarily to direct young men in their study of the textile fibres, to teach their manipulation, and the after processes of manufacture required by the trade.

The principles underlying the art of manufacture are taught by lecture, text-book, and experiment; skill is acquired by intimate contact with the machinery equipment, which consists of various types of machines designed by the prominent builders of cotton machinery in this country.

The aim has been to arrange a course in which the student will be allowed the opportunity of acquiring a good general education along with this special training in textiles. For this reason, in order to allow time to be devoted to culture studies, and to instruction in the general principles of the sciences involved in manufacture, the course does not follow special lines closely until the junior year.

During the junior and senior years, in which more time is devoted to textile subjects, the student is brought face to face with facts and conditions, from the proper observation and study of which he may obtain information and experience that would take him years to acquire in the mills.

This course does not presume to fit one for the management of a mill, but is intended to give the student a broad foundation on which to specialize, and the graduate is in possession of such information, and has acquired such experience and knowledge in handling raw materials and manufacturing machinery as, if supplemented by energy, application, and tact, will soon lead to rapid advancement in the special line of work taken up.

COURSE VI.—TEXTILE INDUSTRY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.....	Second Term....	Third Term.....		First Term.....	Second Term....	Third Term.....
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (260).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (232).....	3	3	3
Agriculture (101).....	2	2	2	Forge Work (240).....	3	3	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522-4-5).....	5	3	3	Foundry (241).....	2	3	3
English (502).....	3	3	3	Pattern Making (262).....	2	3	3
History (513, 514).....	2	2	2	Mechanical Drawing (234).....	2	2	2
Chemistry (300).....	3	3	3	Chemical Lab. (301).....	3	2	2
Physics (220).....	2	2	2	Descriptive Geom. (523).....	3	—	—
Surveying (530).....	—	2	2	Surveying Field (530).....	—	2	2
				Military Drill (602).....	3	3	3

Junior Class

Mathematics (525-527).....	5	5	5	Machine Shop (250).....	3	3	3
English (503).....	2	2	2	Chemical Lab. (303, 420).....	3	3	3
German (540).....	2	2	2	Weaving (410, 411).....	3	3	3
Textile Chemistry (420).....	1	1	1	Carding and Spinning (400, 406)	3	3	3
Designing (412).....	1	1	1	Military Drill (602).....	3	3	3
Carding and Spinning (400, 406)	1	1	1				
Mechanism (210).....	2	—	—				
Mechanics (211).....	—	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	—	2*	3	Mechanical Lab. (215).....	—	3	3
German (541).....	2	2	2	Cam Drawing (239a).....	2	—	—
Political Economy (515).....	3	2*	—	Carding and Spinning (407, 409)	3	2	3
Mechanical Eng. (213).....	3	3	—	Dyeing (421).....	4	4	3
Carding and Spinning (407, 409)	2	2	2	Weaving (410, 411).....	4	4	4
Textile Chemistry (421).....	1	1	1	Military Drill (602).....	3	3	3
Designing (412).....	2	2	2				
Cloth Analysis (414).....	—	1	1				
Jacquard Designing (413).....	—	—	2				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

Special Courses

Besides students in the usual undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of the course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of the uniform and board in barracks.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundations in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical. No special classes will be formed, and students desiring to enter the junior class will be expected to be prepared on elementary mechanical drawing, physics and chemistry, and on mathematics, through plane trigonometry. They will be expected to take with the junior class, in addition to their electrical studies, physics, mechanics, mathematics, mechanical drawing and machine shop work. Without these additional

branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the senior class, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing and machine design.

Students who are not prepared, or are not willing to take the other subjects necessary to successful study of electrical engineering, will not be permitted to take a special course in this line.

Special Textile Course

To meet the demands of southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course, as scheduled and described on the preceding pages.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, and is thoroughly practical and allows a greater portion of the student's time to be devoted to the pursuit of textiles in its several branches.

To pursue this course successfully, the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 11th to 16th, 1907, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experi-

ence in some cotton mill. They will not be required to perform military duty, but will be subject to the general rules and regulations of the College. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

Course of Study

FIRST YEAR.	Hours Per Week. 1st Term.	Hours Per Week. 2d Term.	Hours Per Week. 3d Term.
Mathematics (begin Algebra)	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory) . . .	2	2	2
Carding and Spinning (practical) .	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Free-hand drawing	3	3	3
	—	—	—
	30	30	30
SECOND YEAR.			
Mathematics, (complete Geom- etry)	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory) . .	2	2	2
Carding and Spinning (practical) .	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Designing	2	3	3
Weaving	5	8	8
	—	—	—
	30	30	30

Irregular Courses

Every student is required to pursue one of the regular courses, as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.
2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.
3. Irregular courses are not granted to students in the preparatory class.
4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Courses

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home then he must stand his examination for one of the College classes and, failing to pass the required

examination for the freshman class, will not be allowed to enter the preparatory class, but must return home.

The instruction in this department is under the immediate supervision of the professors of English, mathematics, history, and geology in the College, and is closely articulated with the work of the advanced classes.

The course of study is as follows:

Arithmetic, 5 hours a week.

Algebra, 5 hours a week.

Grammar and Composition, 5 hours a week.

Reading and Spelling, 5 hours a week.

Geography, 2 hours a week.

History, 3 hours a week.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course the next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Reports, Grades and Promotions

Reports of class-standing and discipline are sent to parents at intervals of approximately one month throughout the session. During 1907-1908 these reports will be made up for the periods ending on the following dates, and will usually be mailed to parents about one week later: Oct. 25th and Dec. 13th,* 1907; Feb. 7th, Mar. 6th,* Apr. 17th, and May 29th,* 1908. Dates marked with the asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

The session is divided into three terms, ending Dec. 22d, 1907, March 13th, and June 7th, 1908, respectively. Examinations are held at the close of each term, and reports are sent to parents giving the results of these examinations

and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent., on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

No student is entitled to a second examination in any subject, except by special permission of the Faculty. In case of only one or two failures such permission is usually granted, provided the student's record indicates a reasonable degree of application to his studies.

Students whose conditions have not been removed by the opening of the next session will be required to take the work of the preceding year over, unless for special reasons an extension of time is allowed.

Students who are taking over the work of any year in a regular course, or who for any reason have been put back from a higher to a lower class, are required to take the full work of that class.

A student taking any subject over waives the right to all previous records in that subject, and is placed upon the same footing as students taking the work for the first time.

Parents will be advised to withdraw students who habitually shirk duties.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make first grade (90 per cent. or over) in all studies for any session are

designated as *distinguished*, and their names are published in the catalogue of the succeeding year.

Trustees Medal.—The Board of Trustees has established a gold medal to be awarded annually to the best speaker among the representatives of the literary societies at commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1906 by D. B. Peurifoy, '07.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won by P. H. Adams, Calhoun; C. W. Wannamaker, Columbian; E. H. Jones, Palmetto.

In oratory by T. E. Keitt, Calhoun; D. B. Peurifoy, Columbian; W. O. Pratt, Palmetto.

In declamation by E. V. Garrett, Calhoun; H. P. Riser, Columbian; H. K. Strickland, Palmetto.

The Chronicle Medals.—*The Chronicle*, the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year. Won in 1906 by A. F. Cleveland, for best story; by F. B. McLaurin, for best poem; and by H. W. Moore, for best essay.

The Colors of Battalion are awarded at the close of each session to the best drilled battalion, and are carried by it during the succeeding session. In June, 1906, this distinction was won by the First Battalion, T. E. Stokes, Cadet Major.

A blue silk C. A. C. Flag is awarded June of each year to the best drilled company, and carried by it during the succeeding year. This was won in June, 1906, by Company "D," L. R. Hoyt, Captain.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1906 by Cadet C. W. Busch, class of 1908.

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the Official Army Register of the succeeding year. At the end of the session 1905-1906, the names of T. E. Stokes, W. P. White and F. T. Barton were published.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States Army. At the end of session 1905-1906, T. E. Stokes, W. P. White and F. T. Barton were recommended.

Second Lieutenancy U. S. Army.—General Orders, No. 39, War Department, contains the following paragraph:

“The reports of the regular inspections of the colleges and schools to which officers of the Army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the General Staff for its critical examination, and the Chief of Staff shall report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in the Regular Army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men.”

The term “honor graduate” signifies any graduate who would rank as one of the first five of his class.

Fees and Expenses

The regular fees and charges for the session of 1907-1908 will be as follows:

Incidental fee.....	\$ 5 00
Medical fee.....	5 00
Uniform	23 00
Khaki Uniform.....	5 20
Board and washing.....	67 52
Breakage fee.....	3 00
Tuition	40 00
Total	\$148 72

These charges must be paid in quarterly installments as follows:

September 11th, 1907.....	\$62 88
November 13th, 1907.....	26 88
January 29th, 1908.....	26 88
April 1st, 1908.....	26 88

Remittances should be made in cash, or by money order or New York exchange—*not by local check*—to Dr. P. H. E. Sloan, Treasurer, Clemson College, S. C. Banks charge exchange on local checks.

A deduction will be made for board and washing only when a student is absent one month or more.

The breakage fee is a deposit to cover damage or destruction of College property, and any amount remaining to the credit of a student at the end of the session will be returned to him. Whenever College property is damaged the cost of repair is charged to the individual student, if the responsibility can be determined. Otherwise the cost is divided equally among all the students. Any student whose breakage account exceeds \$3.00 will be required to make another deposit.

A fee of \$1.50 is charged for diploma, payable before graduation.

*The price of uniform is subject to market fluctuations, and cadets often need a second pair of trousers.

The above charges do not include cost of books and stationery, which, however, may be obtained at the Cadet Exchange at wholesale prices.

Each student must provide himself with 4 sheets, 2 blankets, a comfort, 6 towels, 1 pillow, 2 pillow cases, 1 mattress. Beds are single width. Mattresses will be kept by the College at wholesale prices.

Free Tuition

Section 1120, Revised Statutes of South Carolina, 1893, Vol. I., setting forth the powers and duties of the Board of Trustees, contains the following provision:

“They shall charge each student a tuition fee of forty dollars per annum; indigent students shall not be required to pay said tuition fee.”

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

For students receiving free tuition the quarterly charges will be \$10 less in each case than the amounts given above, namely:

September 13th, 1907.....	\$52 88
November 13th, 1907.....	16 88
January 29th, 1908.....	16 88
April 1st, 1908.....	16 88

The total charges for the year in such cases are only \$108.72.

Agricultural Scholarships

By an Act of the State Legislature in the session of 1904, and amended in session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and apportioned among the counties in the same manner as the members of the Senate and House of Representatives.

The law provides "That the said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said College for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural course and the textile courses: *Provided*, That not more than one scholarship from each County shall be open to the textile course.

Examination questions are to be prepared by the President and Faculty of the College and sent to the County Board of Education of each county on or before the 15th day of July in each year, with a statement of the number of vacant scholarships to which the county is entitled. The County Boards of Education shall hold the examinations by numbers, *i. e.*, by requiring each applicant to draw a number from a miscellaneous collection of numbers furnished by the County Board. Each applicant shall then seal his name in an envelope, which shall be kept sealed by County Boards of Education. The applicants shall then put their numbers and not their names on their papers. The papers shall be forwarded to the President of Clemson College and the members of the Faculty of that institution, who may be designated by the President, shall examine the papers and return the marks of the applicant to the County Boards of Education by the numbers as furnished to them. The County Boards of Education shall then open the envelopes containing the names and make recommendations as to the award of the scholarships to the State Board of Education.

Section 4 reads, "That before applying for said scholarships applicants shall make proof under oath to their respective County Boards of Education, as required by law

for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said Board permission to stand such examination."

The law further provides that these scholarships "shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses."

NOTE: The \$100.00 does not include the Khaki uniform.

Textile Scholarships for Two-Year Course

Victor Mfg. Co. Scholarship. Established by Lewis W. Parker.

Willimantic Scholarship. "In memory of W. E. Borrows, a friend of mill operatives." Open to any resident of the State in need of assistance, and who is recommended by his employer.

Metz Scholarship, by H. A. Metz, of H. A. Metz & Co., New York.

Draper Scholarship, by Draper Co., Hopedale, Mass.

These scholarships are valued at \$50.00.

County Apportionment

The one hundred and sixty-five scholarships provided for in this institution by the Legislature are apportioned to the Counties of the State according to law, as follows:

Abbeville	4	Hampton	3
Aiken	5	Horry	3
Anderson	6	Kershaw	3
Bamberg	3	Lancaster	3
Barnwell	4	Laurens	4
Beaufort	4	Lee	3
Berkeley	4	Lexington	4
Charleston	9	Marlboro	4
Cherokee	3	Marion	4
Chester	4	Newberry	4
Chesterfield	3	Oconee	3
Clarendon	4	Orangeburg	6
Colleton	4	Pickens	3
Darlington	4	Richland	5
Dorchester	2	Saluda	3
Edgefield	3	Sumter	4
Fairfield	4	Spartanburg	7
Florence	4	Union	3
Georgetown	3	Williamsburg	4
Greenville	6	York	5
Greenwood	4		

GROUNDS, BUILDINGS AND
 EQUIPMENT

Grounds and Buildings

CAMPUS AND FARM.—The College grounds occupy about 1,122 acres of land, including the campus, sites of buildings and residences, grounds for military drill and outdoor athletics, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

THE MAIN BUILDING is a three-story brick structure, 130 by 140 feet, trimmed with gray sandstone. It contains twenty-two rooms, including recitation rooms, library and reading room, literary society and Y. M. C. A. Hall, physical laboratory, besides the offices of the President, the Commandant, the Treasurer and a reception room. Adjoining this building is Memorial Hall, the College chapel, which has a seating capacity of about 1,000. It is used for religious services and as an assembly room. In the tower of this building there is a tower clock. The building is provided with steam heat and electric lights.

THE CADET BARRACKS comprise two large brick buildings. One is three stories high and contains one hundred and forty-seven rooms for students, a dining hall 134 by 44 feet, and a kitchen 50 by 37 feet. The other building is 199 by 42 feet, and contains 104 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure spring water. The rooms in the barracks are furnished with single width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silver ware, and china, and the kitchen is furnished with modern culinary appliances.

The bath rooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

A new barracks is now in process of construction. It will have 100 rooms and will be equipped with the modern conveniences, such as steam heat, electric lights and water.

GYMNASIUM.—A large room in the basement of Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. During the past year, this room was equipped with well-selected gymnasium apparatus. Among the apparatus are to be found a horizontal bar, parallel bar, spring board, travelling rings, flying rings, climbing rope, horse, low parallels, floor mats and take-off board.

The object of the gymnasium is to give to those students interested in athletics, training all the year round, so that they will constantly be in good condition for work on the athletic teams. It is also designed for those students who do not take other forms of exercise and depend upon the gymnasium for their only means of physical development. The work is not required, but is engaged in by a large number of students. A member of the Faculty superintends the work and directs the exercises.

MUSEUM.—On the first floor of Agricultural Hall, the Museum of Natural History is located. During the past year, the museum has been furnished with large cases and the collections of the geologist, entomologist and botanist have been installed.

NEW CENTRAL POWER AND HEATING PLANT.—The College has in course of erection a new Central Heating and Power Plant. This plant will contain 2-150 H. P. Stirling water tube boilers, and 2-100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment will consist of 1-114 H. P. Fleming side crank engine, direct connected to a 70 K. W. 2,300

volt, 3-phase alternator with direct connected excitor, and 1-122 H. P. Fleming 4 valve engine direct connected to a 3-wire 75 K. W. direct current generator.

A 75 K. W. rotary convertor will be used to convert from one kind of service to the other.

The switch-board equipment will consist of three standard blue Vermont panels, and three black enamelled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator will be connected to the rotary convertor through 3-25 K. W. transformers. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The new plant will be in complete operation by the opening of the session '07-'08.

THE HOSPITAL, located about a quarter of a mile from the barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the Surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

THE LAUNDRY is a brick building specially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for students.

Agricultural Buildings

THE AGRICULTURAL HALL is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings of oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides class-rooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology,

veterinary science, dairying and animal husbandry, geology and mineralogy, and offices for the Experiment Station. It also contains a room 40 by 60 feet, with a gallery, for a natural history museum, and a gymnasium hall of the same dimensions below.

THE HORTICULTURAL GROUNDS embrace an area of thirty acres. Eight acres are devoted to apples for experiment purposes, six acres to peaches, two acres to grapes, two acres to pecans, one acre to plums, seven acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs and flowers.

THE GREENHOUSE is 21x140 feet and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains three thousand large pot plants of various kinds and nine thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a centre building 30x30 feet, and two wings each 20x30 feet.

THE CANNERY is a frame building 25x35 feet. It is equipped for canning fruits and vegetables of all kinds.

THE VETERINARY HOSPITAL is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water and is heated by means of stoves. The basement contains dissecting room and a small room for hot water plant, coal and general storage. On the first floor are rooms for office, instruments and medicines, toilet, horse shoeing, harness closet, and an examining floor, operating table, soaking vat, three box stalls and three tie stalls. On the second floor are rooms for attendant, pharmacy, storage of grain, kennels and cages for small animals and a hay mow.

Convenient to this building is a shed 24x40 feet, enclosed on three sides, but well lighted, and it has a large hay loft. There is a well-sodded lot containing about two acres con-

nected with the hospital. It is fenced with woven wire and divided into three paddocks. In one of these is an open cattle shed 13 by 32 feet, and a chute used in dehorning, inoculations, and other operations where a herd is to be handled.

THE DAIRY BUILDING is a wooden structure constructed and equipped especially to illustrate the most approved methods of dairy practice.

THE EXPERIMENT STATION DAIRY BARN is a new building, 110 by 38 feet, located on one of the highest elevations of the College property. It is a thoroughly modern structure from the standpoint of both convenience and sanitary conditions. It has a concrete floor, is lighted by electricity, and contains water in all parts of the building for washing floors, mixing food, etc. It is fitted with 38 Taylor steel stanchions, which are both strong and comfortable. At one end of the building are four 50-ton silos, and the second floor, which has a capacity of 50 tons of loose hay, is equipped with a hay carrier that will elevate a load of hay at a time.

A smaller barn, 50 feet in the rear, provides hospital stalls for sick cows, and also stalls and pens for young calves.

A number of paddocks and pastures have been provided to facilitate the management and to furnish sufficient pasturage for the stock.

FARM BUILDINGS.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the equipment for instruction in agriculture.

Mechanical and Electrical Buildings

THE MECHANICAL BUILDING is a substantial brick structure containing about 30,000 square feet of floor space. On the first floor are the mechanical laboratory, machine shop, forge shop, foundry, and the power and light station.

On the second floor are the offices and recitation rooms, while the wood shop occupies the whole of a two-story wing, 45 by 100 feet. The third floor is entirely occupied by the division of drawing.

THE ELECTRICAL INSTRUMENT LABORATORY is a brick building of special design, arranged especially for delicate instrument work.

THE DYNAMO LABORATORY is a modern brick structure, 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use, it also contains the electrical engineering lecture room.

Chemical Buildings

THE CHEMICAL DEPARTMENT occupies two buildings. One is a two-story brick structure, 50 by 80 feet, covered with slate, and finished inside with Southern pine. Overlapping this at one corner, and connected with it, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building constitutes a commodious structure adequate to all the needs of the department.

Textile Building

THE TEXTILE BUILDING is a two-story brick structure, with basement, of modern cotton mill design and construction. The first floor is occupied by a recitation room, picker, carding and spinning rooms, and an office. On the second floor are the designing and weaving rooms, a laboratory for experimental dyeing, and two offices. In the basement is located the dyeing, bleaching and printing machinery.

Residences and Hotel

THE CALHOUN MANSION, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

RESIDENCES.—Ten two-story brick buildings, nine six-room cottages, and thirty smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

CLEMSON CLUB HOTEL.—The College Hotel, a frame building, situated on a hill overlooking the campus, is operated as a club by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

Water, Light and Heat

THE GENERAL WATER SUPPLY is collected from springs through iron pipes into a reservoir, from which it is pumped into a standpipe one hundred feet high. From this it is distributed through mains to the various College buildings and to all parts of the campus.

THE DRINKING WATER SUPPLY is pumped from a bold spring directly into barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

THE SEWER SYSTEM.—All of the larger buildings and a number of residences are connected with an adequate sewer system, which empties into Seneca River more than half a mile from the campus.

LIGHT AND HEAT.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station in the Mechanical building. The seven principal College buildings are heated by steam.

Equipment and Practical Instruction

Agricultural Department

Agriculture

The class room, laboratory and office of the agricultural division are located on the first floor of Agricultural Hall, rooms 11, 12 and 13. The laboratory is supplied with the necessary equipment, for familiarizing students with the more important economic plant seed.

The College farm has a large storage barn provided with silos, a cow barn furnished with various forms of stanchions, a mule barn provided with the most improved forms of stalls and feed-racks, implement and wagon sheds for storage of tools, etc., compost building for making compost in large quantities, and two large cribs for storage of corn.

Among agricultural machinery and implements may be mentioned the following: Self-binder, corn-harvester, Deering ball-bearing mower, Osborne mower, self-dumping rake, check-row corn planter, Buckeye cultivator, B. F. Avery cultivator, Tower cultivator, disc-cultivator, spring-toothed harrow, smoothing harrows, various forms of pulverizers, manure-spreading machines, fertilizer and grain drill, various forms of small fertilizer drills, Planet Jr. drill, two Planet Jr. plows, scientific mill, stone grist mill, Tornado ensilage cutter, small thresher, hand-gin, rock-crusher, road machine, three terrace levels, and a 10-kw. electric motor.

Geology and Mineralogy

The division of geology and mineralogy occupies three rooms on the second floor of the new agricultural building.

The systematic collections contain about 1,800 labeled specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory, and are available to

students and public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying the more important species at sight, and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photomicrographic camera, and all important accessories, are also provided.

The class-room is supplied with large physical wall maps of the world and of all the continents, a complete series of topographic contour-maps furnished by the United States Geological Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geological department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

Soil Physics

The soil physics laboratory is located on the ground floor of Agricultural Hall and is provided with apparatus necessary for the determination of water content, absorptive capacity, water-holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

Veterinary Science

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The class room, laboratory and office of the Veterinary division are located in Agricultural Hall, the laboratory and office on the first floor, rooms 15 and 16, and the class room on the ground floor. The laboratory is supplied with microscopes, microtome, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work. The lecture room has a concrete floor, elevated seats, and is so arranged that the largest domestic animal may at any time be used before the classes for demonstration purposes.

The veterinary hospital is a frame structure of modern design, 48 by 65 feet, containing rooms for office, drugs and dissecting, besides stalls, feed-bins, water supply and electric lights, and a revolving operating table.

Zoology and Entomology

The laboratory, recitation room and office of this division are on the second floor of Agricultural Hall. The laboratory is equipped with simple and compound microscopes, microtomes, dissecting instruments, photographic outfit, stereopticon, lantern slides and charts. The entomological cabinet contains a large number of injurious and beneficial insects.

The students have access to a small but carefully selected entomological library.

Dairying and Animal Husbandry

The dairy building is provided with steam plant and water works, and everything required for making butter and cheese. In this laboratory are located the leading makes of cream separators, churns, and milk-testers.

The new experiment barn is provided with modern apparatus and conveniences for the proper handling of cattle, and the following breeds of cattle have been recently purchased and placed at this barn for experimental purposes:

Ayrshire, Devon, Jersey, Hereford, Polled Angus, Polled Durham; Short-horn (bare-faced dairy strains), Guernsey, Holstein; also six each of registered Shropshire and South-down sheep.

Botany and Bacteriology

These laboratories are located on the third floor of Agricultural Hall, rooms 21, 22, and 23. They contain a good equipment for satisfactory work in botany and bacteriology, including twenty-five dissecting microscopes, twenty compound microscopes, student dissecting sets, student microtomes, Zimmermann microtome, embedding baths, balances, water still, incubator, Arnold and Koch sterilizers, autoclave, dry ovens, anaerobic apparatus, cameras for ordinary and photo-micrographic work.

The students have access to a small botanical library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect proof cases on the Museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, the herbarium of the Botanist, including about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of Central New York. A set of the F. V. Coville plants, of New York State, has also been added recently. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora.

Mechanical and Electrical Department

Electrical Engineering

ELECTRICAL INSTRUMENT LABORATORY.—This is a separate brick building, designed especially for delicate electromagnetic work—no iron, steel or other magnetic substances having been used in its permanent construction. It contains, in addition to all necessary elementary apparatus, the

following instruments: Kelvin-Deka ampere balance, Kelvin four-coil astatic galvanometer, four D'Arsonval dead-beat galvanometers, large ring tangent galvanometer, three Elliott Brothers' standard resistance sets, Elliott Brothers' standard tangent galvanometer, Queen's standard ballistic galvanometer, Nalder Brothers' sensitive galvanometer, Rowland-D'Arsonval ballistic galvanometers, Willyoung standard condenser, Becker's chemical balance, Cahart-Clark standard cell, thermometers, Wheatstone bridges, storage and primary cells, etc.

DYNAMO LABORATORY.—To meet the demands of larger attendance and increased equipment, a new building has been provided in which is installed the dynamo-electric machinery. This building also contains a class room and a dark room for photometric work. It is a single story brick structure, 37x80 feet, with basement for supply rooms.

The main floor is divided into a class room 25x35 feet, and a dynamo laboratory room 53x35 feet. The building is heated by steam and lighted by inclosed arc and incandescent lamps.

The lecture room has elevated seats and is equipped with a complete line of illustration models, apparatus and electrical instruments. It contains an electro magnet capable of supporting the weight of two tons.

The Dynamo Laboratory contains, in addition to rheostats, speed counters, switches, and other small apparatus, the following machines and instruments:

50 H. P. high speed McEwen automatic engine.

Direct Current Generators—15 kilowatt Mather, 17 kilowatt Lundell, 2 1-2 kilowatt Crocker-Wheeler, two 2 kilowatt Kester.

Direct Current Motors—15 and 10 H. P. Kester, three 1-6 H. P. Crocker-Wheeler.

Direct Current Instruments—Weston laboratory standard voltmeter, set of Weston portables, Jewell ammeter and

voltmeter, Weston switchboard ammeter and voltmeter, Thompson recording wattmeter, etc.

Arc Lighting Apparatus—Brush and Thompson-Houston generators, Gen. Elec. Co. constant current transformer, Principal makes of open and inclosed arc lamps.

Alternating Current Apparatus—15 kilowatt G. E. Co. 2 and 3 and 6 phase revolving field generator complete with marble switchboard and full set of indicating instruments.

7 1-2 kilowatt G. E. Co. single 2 and 3 phase rotary converter; 7 kilowatt 3 phase converter built by students.

Genl. Elec. Co. 2 and 3 phase induction motors. Three, 3,000 watt constant potential transformers. Assortment of smaller transformers, motors and models.

Alternating Current Instruments—Two Weston and one Genl. Elec. wattmeters, Weston standard A. C. voltmeter, 6 Thompson inclined coil ammeters and voltmeters, Cardew and electrostatic voltmeters, Kelvin ampere balance, Siemens electro-dynamometer, Stanley hot wire ammeter.

Miscellaneous—Two Schaeffer & Budenberg tachometers, leading types of lightning arresters, fuse testing apparatus.

The dark room contains a complete outfit for high potential, high frequency and X-ray work, and a Deshler-McAllister central station type photometer, with rotating stand for incandescent lamp testing.

COLLEGE POWER AND LIGHT PLANT.—The machinery in the dynamo laboratory is driven by the 50 horse power engine or two 20 horse power motors. Steam and electric power for these is furnished by the power plant situated in a neighboring building. This plant consists of an 85 horse power Corliss engine, driving a 40 kilowatt Westinghouse generator and a 30 kilowatt G. E. Co.'s multipolar generator. This station furnishes power to 20 motors, ranging from 3 to 30 horse power. These motors are used at different points on the College property for a variety of pur-

poses, such as pumping water, driving agricultural machinery, supplying power for machine shop, wood shop, textile department, etc. Several of these are at a considerable distance from the power station, thus furnishing examples of electrical transmission of power. In addition to power for driving motors, the same generators furnish electricity for lighting the barracks and other College buildings. Students have access to this plant, and are thus enabled to see the practical workings of a combined electric light and power plant, and to test its efficiency.

Mechanical Engineering

This laboratory occupies a room 41 by 45 feet, and contains the following equipment:

For Steam Engineering—15 horse-power horizontal, locomotive type boiler; 6 horse-power vertical boiler; Erie 6 horse-power plain slide-valve steam engine; 6 horse-power vertical steam engine built in the shops; Payne 15 horse-power high speed automatic engine; Corliss cross-compound condensing steam engine arranged so that either side may be run condensing or non-condensing and each side independent of the other; Wheeler surface condenser with combined air and circulating pumps; set of steam-gauge testing apparatus; Carpenter's separating steam calorimeter; two throttling steam calorimeters; six steam engine indicators of various makes; two standard injectors.

For Hydraulic Engineering—Two hydraulic rams; Pelton water motor; power triplex pump; three duplex pumps of different makes; three weirs; recording altitude gauge; 6 pressure and altitude gauges.

For Compressed Air—Clayton air compressor with jacketed cylinders; improved air motor.

For Fuel and Lubricants—Carpenter's fuel calorimeter, with scales, balances, and oxygen generating devices; standard viscosimeter.

For Testing Building Materials—100,000-pound Olsen automatic vertical testing machine driven by 5-horse power Westinghouse electric motor, and fitted for tension, compression, and transverse testing; Fairbank's cement testing machine; 3,000-pound transverse testing machine. The laboratory also contains a 5-horse power Otto gasoline engine, an Ericsson hot-air engine, a 6-horse power transmission dynamometer, graduated to read horse power direct and built by students, and an assortment of standard thermometers, weights and measures. The apparatus is so arranged that any of it may be used for separate or combined tests, or for any original investigations. Besides the equipment in this room, the electric light and power plant, the heating plant of the College and barracks, the isolated plants at the dairy, horticultural grounds and pumping station are available for instructional purposes.

Physics

The physical lecture room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and experimental work of a general course in physics.

Drawing and Designing

The drawing rooms occupy the entire third floor of the Mechanical Engineering building. The third and fourth floors of the tower are also used as a dark room and blueprint room respectively. A good selection of drawings and models in these rooms are of great benefit to the student in his work. These rooms are equipped to accommodate from 20 to 36 students at a time, with cases, boards and T-squares for over 375. Members of all classes are required to furnish their own drawing instruments. All instruments used by students must be approved by the instructor in charge; an inferior grade of instruments will not be acceptable. Students are advised to buy their instruments at

the Cadet Exchange, where samples can be seen and wholesale prices obtained.

Forge and Foundry

FORGE SHOP.—This is a room 37 by 60 feet, situated in a wing of the Mechanical building. It is equipped with 18 Buffalo down draft forges and steel-faced anvils, with sets of hammers, tongs, swages, fullers, flatters, etc. Continuous blast is furnished by a Buffalo blower driven by a 15 H. P. electric motor, the down draft being produced by a 60-inch Buffalo exhaust fan. The shop is also supplied with vises, swage blocks, emery wheel, bending cone, drill-press, bolt shear, etc.

FOUNDRIY.—This building occupies a space 43 by 76 feet and is free from posts or other obstructions. It is equipped with a 26-inch Victor Collian cupola, a Millett's core oven, a two-ton post crane, 8 improved molder's benches, an 18-inch brass furnace, with its usual complement of crucibles, tongs, etc., full set of molder's tools for the accommodation of 20 students, besides the usual accessories to the foundry, such as ladles, flasks, etc.

Machine Shop

The machine shop is located in the southwest wing of the Mechanical building, which wing is 45 by 100 feet, well lighted, heated and ventilated.

It contains seventeen benches, with vises, 105 kits of tools and the following machine tools: 1 18-in.x12-foot engine lathe; 1 18-in.x8-foot engine lathe; 3 14-in.x6-foot engine lathes; 4 14-in.x6-foot Lodge & Shipley lathes; 2 14-in.x6-foot F. E. Reed compound rest engine lathes; 2 14-in.x6-foot Hendey compound rest engine lathes; 1 10-in.x4-foot F. E. Reed pattern maker's lathe; 1 15-in.x8-foot speed lathe; 1 Cincinnati Universal Milling machine, No. 3, all power feeds; 1 Lodge and Davis' Universal Milling

machine; 1 18-in. drill press; 1 28-in. back geared drill press; 1 22-in.x6-foot Powell planer; 1 Cincinnati cutter and tool grinder; 1 15-in. Gould and Eberhardt crank shaper; 1 dry emery grinder; 1 12-in. power hack saw; 1 36-in. grind-stone; 1 22-in. Leland and Faulconer wet emery tool grinder; 1 American twist drill grinder; 1 10-in. slotting machine, built by New Haven Mfg. Co.; 1 fan; 1 forge. The tool room in connection with the shop contains all tools, etc., necessary for use with the machines.

The 7 H. P. motor which drives the machinery was built by students.

Woodwork

The wood shop occupies the two-story wing on the east side of the Mechanical Engineering building, 45 by 100 feet. The lower floor contains the freshman class room, equipped with fifteen work benches and sets of tools, six turning lathes, with tools for each, and other tools for hand work. On this floor is also the planing mill machinery, consisting of a double roll planer, power rip and cut-off saws, band saw, scroll saw, 16-inch jointer, moulding machine, mortising machine, tenoning machine, emery grinder, lathe with 12-foot bed, etc.

The upper floor is devoted principally to the work for the sophomore class, and is fitted up with fifteen workbenches and ninety sets of tools—one set for each student; six 10-in. turning lathes, large pattern lathe, combination saw and boring machine, double head shaper, panelling machine, carving machine, jig-saw, universal trimming machine, special door and sash clamps, steam glue pots, miter cutters, etc. The power is supplied by electric motors conveniently located in the various rooms. A large lumber yard and dry-kiln provide seasoned lumber at all times.

Chemical Department

The original Chemical Laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Two of these, connecting with each other, are employed as a laboratory for the agricultural seniors. Of the other rooms on this floor, one is a laboratory for post-graduate students and one a balance room, while the third is reserved for such use as the ever-increasing demands upon the department may require.

On the second floor of this building, there are two large laboratories, one for the juniors in analytical chemistry, the other for the sophomores in general chemistry. A third and smaller room is used as a balance room.

The junior laboratory will accommodate seventy-two students, thirty-six at a time; the sophomore laboratory, one hundred and twenty students, sixty at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried eighty-five feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to the chemical work of the State and of the Experiment Station. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used respectively for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is used for the agricultural analysis of the Experiment Station. Adjoining this is a balance room, in which provision is made also for the optical and electrolytic apparatus. Of the remaining rooms, one is used for water analysis, the other as an office.

On the second floor of this building there are seven rooms; a lecture room, and six smaller rooms which are used for recitations, cabinets, apparatus, chemicals, library and professor's laboratory.

The lecture room will seat one hundred and seventy students, the seats being arranged in tiers.

The hoods in this building are all connected by earthenware pipes with a tightly-built room just under the roof, over which there is a large ventilator.

The rooms in the basement are used for assaying ores, for the preparation of agricultural products for analysis, and for storage. An electric motor located in one of these rooms supplies the power which drives the machinery for grinding and pulping samples of vegetable substances.

Department of Textile Industry

The building is a brick structure of modern cotton mill design, 168 by 75. It is of the slow burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, contain-

ing offices, lecture rooms and laboratories, retains the more prominent features of a typical southern cotton mill. This affords the students an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30 H. P. 220 volt direct current Westinghouse motor, driving the carding machinery; and a 20 H. P. 220 volt direct current General Electric Co. motor, driving the spinning machinery.

The second floor is occupied by the experimental dyeing laboratory, hand looms, power looms, a lecture room and two offices. The power machinery on this floor is driven by a 20 H. P. 220 volt direct current General Electric Co. motor.

The basement, which is situated under the right hand half of building, is occupied by the dye-house, and is nicely equipped for that purpose.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Co.; steam heating system and automatic fire sprinklers from The D. A. Tompkins Company; shafting, pulleys and hangers, from Jones and Laughlin, Ltd., and from T. B. Wood's Sons.

Carding Division

Pickers—One Atherton automatic feeder; one Atherton breaker; one Atherton finisher lapper, with evener motion.

Cards—One Saco & Pettee 40-in. revolving top flat card; one Mason 40-in. revolving top flat card; two traverse wheel grinders; two drum traverse grinders; stripping and burnishing rolls; two complete sets of carder's tools.

Combing—One Mason sliver lap machine; one Mason ribbon lap machine; one Mason six-head combing machine.

Railway Heads—One Saco & Pettee railway head, with evener motion, stop motions, and metallic rolls; one Mason railway head, with evener motion, stop motion, and metallic rolls.

Drawing—One Saco & Pettee drawing frame, 4 deliveries, stop motions, and metallic rolls; one Mason drawing frame, 4 deliveries, stop motions, and metallic rolls.

Fly Frames—One Saco & Pettee 12-in.x6-in. 40 spindle slubber, with latest differential motion; one Saco & Pettee 8-in.x4-in. 60 spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 7-in.x3 1-2 in. 80 spindle fine roving frame, with latest differential motion; one Woonsocket 6-in.x2 1-2-in., 96 spindle jack roving frame, with Daly's improved differential motion.

Spinning Division

Ring Spinning—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mule Spinning—One Mason self-acting spinning mule, 120 spindles, 1 3-4-in. gauge, with all latest improvements.

Spooling—One Draper spooler, 40 spindles; one Saco & Pettee spooler, 72 spindles; one Barber & Coleman knotter.

Twisting—One Draper combination wet and dry twister, 48 spindles; two Fales & Jenks wet twisters, combination filling and taper top wind, 70 spindles each.

Winding—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Co. bobbin winder; one Geo. W.

Payne & Co. skein winder; one Universal cone and tube winder.

Reeling—One D. A. Tompkins Co. adjustable reel, 50 spindles.

Warping—One Draper section warper; one Draper ball warper.

Beaming—One Entwistle beaming machine.

The divisions of carding and spinning are equipped with all necessary supplies, such as doff boxes, roving cans, bobbins, spool, cops, cones, tubes and change gears for all machines.

Weaving Division

Hand Looms—Seventeen hand looms, with 4x4 box motion, and 30 harness shedding engines, arranged for four beam work.

Power Looms—One 40-in. Northrop cam loom, with warp stop motion and automatic filling magazine; one 28-in. Northrop cam loom, with warp stop motion and automatic filling magazine, also fitted with Stafford 20 harness dobby; one Mason 36-in. gingham loom, with 4x1 box motion; one Mason 40-in. loom, with Stafford 20 harness dobby, also arranged for center selvage motion; one Mason 44-in. fancy cotton loom, with 24 harness dobby; one Stafford 30-in. fancy cotton loom, with 20 harness dobby and leno attachment; one Stafford 30-in. dress goods loom, with Stafford 400 hook, single lift, swing cylinder, jacquard; one Knowles 40-in. "Gem" loom, with 30 harness dobby, 4x4 box motion; one Crompton & Knowles 36-in. fancy cotton towel loom; one Crompton 65-in. loom, 4x1 drop box motion, fitted with 624 hook double lift, swing cylinder, jacquard, tied for weaving table damask; one Whitin 40-in. cam loom, arranged to weave up to 6 harness; one Whitin 40-in. fancy cotton loom, fitted with 20 harness dobby; one Whitin heavy pattern duck loom;

one Knowles 30-in. fancy cotton loom, 2x2 box motion, 16 harness dobby; one Kilburn & Lincoln 40-in. loom, arranged for dobby; one Kilburn & Lincoln 40-in. loom, arranged for dobby.

Dressing—one Davis & Furber dresser, complete.

Jacquard card cutting—One Jno. Royle, French index, foot power card cutter.

This division is also equipped with one floor stand, fitted with 8 harness dobby and leno attachment, built specially for illustrating leno weaves; one jacquard tying-up frame; warping pegs; beaming frames; drawing-in frames; extra heddles and heddle frames; reeds; change gears, etc.

Division of Textile Chemistry and Dyeing

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dye-house. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables furnishing accommodations for sixty-four students working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

Dye-house—Nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one steaming and aging box; one mercerizing apparatus for yarn; one calico printing machine; one 20 gal. copper kettle; one set copper measures; one dry closet. There is also an equipment of reels, yarn testers, analytical balances, etc., and necessary instruments for experimental purposes.

Department Library

For the use of students and instructors, a reading room in the textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department and an equipment of old hand machinery, illustrating the methods used before the introduction of power machinery. The room is open every week day throughout the session.

Civil Engineering

The collection of field instruments contains the following: Engineer's transits, with stadia and solar attachment; 3 twenty-inch wye levels, 4 railroad compasses, 2 six-inch vernier compasses; plane table with nine-inch telescope, vertical circle and stadia; drainage level, precision level, current meter with electric recorders, sextant, aneroid barometer, 4 twelve-foot self-reading leveling and stadia rods, twelve-foot New York leveling rods, twelve-foot Boston leveling rod, cross-section rod with clinometer, 6 surveyor's chains, 2 engineer's chains, 6 standard 100-foot steel tapes, 2 sixty-six foot steel tapes, fifty-foot steel tape, and a full supply of ranging poles, flag poles and other accessories.

The office equipment includes planimeter, slide rules, and drafting instruments and appliances. In addition to the drawing done under the immediate direction of the instructor in civil engineering, the regular work in drawing and designing, provided for students pursuing this course, is arranged with special view to their needs. The engineering laboratory and the shops and drawing rooms in which the civil engineering students receive an important part of their

instruction, are described under the equipment of the mechanical and electrical department.

Library*

In the main building is a series of rooms specially constructed for the use of the library. There are now upon the shelves 7,890 volumes, classified under the various heads of literature, history, biography, science, and reference books. In addition to these in the general library, there are 1,493 volumes in Experiment Station and department libraries of the College. There are also about 2,400 government publications, together with about 3,500 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to nineteen of the leading weekly and monthly periodicals, twelve technical journals, the principal daily papers of the state and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the Reception Room in the Main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

*See donations to library, page 139.

DEPARTMENTS OF THE COLLEGE
DETAILED DESCRIPTIONS OF COURSES

Departments of the College

For administrative purposes, the College is divided into seven departments, each presided over by a director, who has general supervision of all the work and interests of his department. The departments comprise the various divisions indicated below, which are in the immediate charge of the professors, associate and assistant professors, and instructors of the respective departments.

Numbers in parentheses refer to description, beginning on page 89.

1. Agricultural Department

Agriculture (100-108).

Geology and Mineralogy (110-117).

Horticulture (120-122).

Veterinary Science (130-139).

Zoology and Entomology (140-142).

Dairying and Animal Husbandry (150-162).

Botany and Bacteriology (170-174).

2. Mechanical and Electrical Department

Electrical Engineering (200-203).

Mechanical Engineering (210-215).

Physics (220-222).

Drawing and Designing (230-239A).

Forge and Foundry (240-242).

Machine Shop (250-251).

Woodwork (260-262).

3. Chemical Department

Chemistry (300-306).

Metallurgy (310-311).

4. Textile Department

Carding and Spinning (400-409).

Weaving and Designing (410-414).

Textile Chemistry and Dyeing (420-421).

5. Academic Department

English (500-504).

History and Political Economy (510-515).

Mathematics and Civil Engineering (520-537).

German (540-541).

6. Military Department

Military Science and Tactics (600-602).

7. Preparatory Department

Detailed Descriptions of Courses

Agricultural Department

Professor Harper, Director.

General Agriculture

Professor Harper.

Associate Professor C. L. Newman.

100. Foundations of Agriculture

FRESHMAN CLASS; ALL COURSES.

A broad elementary introduction to the study of agriculture, embracing treatment of soils, seeds and plants.

101. Field Crops

SOPHOMORE CLASS; COURSES I., II.

The history, classification, characteristics, adaptation, culture, harvesting, marketing and uses of field crops. Terracing.

102. Farm Practice

SOPHOMORE CLASS; COURSES I., II.

The student is taken to the field and performs the work appropriate to different crops, thus becoming familiar with requirements of the various field crops.

103. Farm Practice

JUNIOR CLASS; COURSES I., II.

A continuation of the work begun in Sophomore year and embracing harvesting, seed selection, storing and marketing. Use of tools and farm machinery.

104. Soil Physics

JUNIOR CLASS; COURSE I.

The work in soil physics enables the student to understand the effects of the different methods of treatment of soils, and the influence of these methods upon moisture, texture, aeration, fertility and production. The course is supplemented by laboratory determinations of specific gravity, relative specific gravity, water-holding capacity, capillary power, and rate of percolation of various soils; experiments upon rates of evaporation from the surface, and the

effects of different mulches and methods of cultivation upon retention of soil moisture; mechanical analysis of soils.

105. Agricultural Research and Literature

SENIOR CLASS; COURSE I.

The senior class will study the results of experiment work, conduct experiments, interpret results, and prepare them in bulletin form. Research in agricultural reports and kindred literature will be required upon assigned subjects, the results to be reported in writing.

106. Advance Agronomy and Plant Breeding

SENIOR CLASS; COURSE I.

A critical study of the methods of crop production and the principles and practices of plant breeding and improvement.

107. Agricultural Physics

SENIOR CLASS; COURSE I.

The equipment of the soil laboratory is such that students can successfully conduct experiments along the lines relating to soil management and soil fertility. This is a continuation of the work begun in the junior class. Lectures are delivered on farm drainage; effect of cultivation on the texture of soils, etc.

108. Rural Economy and Farm Management

SENIOR CLASS; COURSE I.

Lectures and recitations upon the employment and management of farm labor, farm equipment and farm management. The lectures include the interrelations of economics and agriculture. Lectures upon the cost and relative profit of various farm operations and systems.

Geology and Mineralogy

Professor Calhoun.

110. Elementary Mineralogy

JUNIOR CLASS; COURSE V.

Laboratory study of crystal forms by the use of models and natural crystals; chemical and physical properties of minerals; practice in the determination of unknown specimens. This is a brief course, intended to give the student an adequate conception of the science of mineralogy together with some practical acquaintance with the more common and important minerals.

111. Mineralogy

JUNIOR CLASS; COURSES IA., III.

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory

work on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to readily identify all but the rarer minerals.

112. Elementary Geology

SENIOR CLASS; COURSES I., IA., II., IV., V.

The elements of dynamical, structural and historical geology. The influences of geologic phenomena on man are emphasized, particularly in the study of rock-decomposition and the formation of soils, the processes of erosion and deposition, and the resultant topographic forms.

113. General Geology

JUNIOR CLASS; COURSE III.

A broad course in the elements of general geology. Special stress is laid on structural and dynamical geology in their relations to the formation of rocks and rock-structures, the metamorphism of rocks, and the deposition of minerals and ores. In historical geology special attention is given to the development of the North American continent.

114. Petrography

SENIOR CLASS; COURSE III.

A study of the structure, composition, origin, and classification of various families of rocks, their distribution, modes of occurrence, and geological importance; microscopic characters of rock-forming minerals, and the use of the petrographic microscope. The course is supplemented by work in the field and laboratory, and the student becomes familiar with rocks and with practical methods of investigation, and their applications to the problems of lithological geology.

115. Economic Geology

SENIOR CLASS; COURSE III.

A general survey of geological products of value, including metallic and non-metallic minerals, and building stones; their origin and nature, distribution, modes of occurrence, and methods of exploitation. The course deals particularly with the economic deposits of North America, with briefer reference to those of other countries for purposes of comparison and for the elucidation of problems of origin, exploitation, etc. The student is required to read and prepare abstracts of the more important monographs and reports.

116. Practical Geology

SENIOR CLASS; COURSE III.

Field study and reports of geological processes and phenomena, rocks and rock structures, both original and secondary, accompanied by laboratory exercises by means of specimens, models, photographs, maps and sections; interpretation and representation of geologic phenomena, and training in the principles and methods of geological surveying, the construction of geological maps and sections, and the preparation of reports.

For description of equipment, see page 66.

117. Mineralogy

SENIOR CLASS; COURSE I.

A general course on the soil-making minerals and rocks. The origin of soils will also be studied.

Horticulture

Associate Professor C. C. Newman.

Instruction is given in the sophomore, junior and senior classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. These practical exercises enable the student to become familiar with all the details of the work.

120. Propagation and Management of Nursery Stock

SOPHOMORE CLASS; COURSE I. JUNIOR CLASS; COURSE II.

Lectures are given on the following subjects and special attention is paid to the practical work along these lines. Stratification of seeds; sowing seeds; seed testing; separation and division; budding and grafting; grading and storing nursery stock; nursery management.

Text-book: The Nursery Book, by L. H. Bailey.

121. Vegetable Gardening

JUNIOR CLASS; COURSES I., II.

Construction of hot-beds and cold-frames, their use and management; preparation of the soil; fertilizing; seed sowing; transplanting and cultivation; gathering; storing and marketing; spraying and spraying equipment.

Text-book: Principles of Vegetable Gardening, by L. H. Bailey.

122. Ornamental Horticulture and Floriculture

SENIOR CLASS; COURSE I.

The work includes ornamental horticulture and floriculture; the propagation and care of ornamental plants; general greenhouse work and management.

For descriptions of buildings, grounds, and equipment, see pages 62 and 63.

Veterinary Science

Associate Professor Klein.

Assistant Powers.

130. Anatomy and Histology

SOPHOMORE CLASS; COURSE II.

A laboratory course in gross and microscopic anatomy, arranged as an introduction to the study of the principles of stock judging and physiology.

131. Anatomy and Physiology

SOPHOMORE CLASS; COURSE I.

A short course arranged for Course I. students as an introduction to their work in judging, feeding and care of live stock.

132. Veterinary Physiology

JUNIOR CLASS; COURSE II.

While this course embraces the study of all the animal functions, especial attention is given to digestion, nutrition, reproduction, milk secretion, and locomotion, these being of greatest importance in the animal industries.

Text-book: A Manual of Veterinary Physiology, by F. Smith.

133. Physiological Demonstrations and Microscopy

JUNIOR CLASS; COURSE II.

A laboratory course in physiology.

134. Surgical Therapeutics

JUNIOR CLASS; COURSE II.

In this course hemorrhages, inflammation, wounds, sprains, bruises and other accidental conditions are considered, together with the use of antiseptics, and the treatment of diseases of the hoofs.

135. Sporadic Animal Diseases

SENIOR CLASS; COURSE II.

A brief course in the non-contagious diseases of farm animals, especial attention being given to cause and prevention.

136. Contagious Animal Diseases

SENIOR CLASS; COURSE II.

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission, symptoms, cause, prevention and treatment of the diseases common to man and animals are studied.

137. Hygiene and Sanitary Science

SENIOR CLASS; COURSE II.

Text-book: A Manual of Veterinary Hygiene, by F. Smith.

138. Veterinary Clinics

SENIOR CLASS; COURSE II.

A free clinic is held at the veterinary hospital every Monday afternoon of the session, except on holidays and during examinations. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

For descriptions of buildings and equipment, see page 67.

Zoology and Entomology

Associate Professor Chambliss.

The instruction in this division is largely conducted by the laboratory method with lectures and recitations, and is so given as to lead the student to observe and think for himself, as well as to secure a working knowledge of the science for practical purposes.

140. Physiology

SOPHOMORE CLASS; COURSES I., II.

An elementary course in which the physiology of digestion, circulation and excretion will receive special attention. The instruction will serve as a basis for hygiene and as an aid to those who may teach in public schools.

141. General Invertebrate Zoology

JUNIOR CLASS; COURSES I., II.

This course includes a general discussion of groups, and dissection of types, especially of the forms related to insects, and is further extended to lay a foundation for a knowledge of animal development. Animals of economic importance are given special attention.

Books of Reference: Invertebrate Morphology, by McMurrich; The Riverside Natural History; Text-book of Zoology, by Parker and Howell.

142. Economic Entomology

SENIOR CLASS; COURSES I., II.

By laboratory studies and field work, the students in this course will be made familiar with the most important injurious insects. For the systematic and biological work, a collection of one hundred species, with full notes on the habits of twenty-five, will be required. The practical work will consist of the preparation and application of insecticides.

Text-books: Manual for the Study of Insects, by Comstock; Elements of Insect Anatomy, by Comstock and Kellogg.

Books of Reference: Insects Injurious to Fruits, by Saunders; Economic Entomology, by Smith; Guide to Study of Insects, and a Text-book of Entomology, by Packard; U. S. Government Experiment Station and State publications on Entomology.

For description of equipment, see page 68.

Animal Husbandry and Dairying

Associate Professor John Michels.

Instructor Burgess.

150. Types of Cattle, Horses and Mules

FRESHMAN CLASS; COURSES I., II.

Market and breed types of dairy and beef cattle; their origin and history. Types and breeds of horses and mules.

152. Types of Sheep and Hogs

SOPHOMORE CLASS; COURSE II.

Breed and market types of sheep and hogs; their origin and history.

153. Principles of Breeding

SOPHOMORE CLASS; COURSE II.

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding; in-an-in breeding; line-breeding, etc.

154. Stock Judging

SOPHOMORE CLASS; COURSE II.

Judging dairy and beef cattle, sheep, hogs, horses, and mules, and score card practice.

155. Care and Management of Dairy Cattle

JUNIOR CLASS; COURSE II.

Care and management, housing and feeding dairy cattle.

156. Stock Feeding (short course)

SENIOR CLASS; COURSE I.

Stock feeding, including the consideration of the comparative food value and cost of all southern feeding stuffs; economic methods of feeding to produce milk, beef, etc.; and method of feeding work animals.

157, 158. Stock Feeding

SENIOR CLASS; COURSE II.

Stock feeding, including composition and digestibility of feeding stuffs; their preparation, use and cost; nutritive ratios; digestion, etc. The available feed stuffs of the south are discussed at length.

159. Group Judging

SENIOR CLASS; COURSE II.

Judging groups of animals similar to county and state fair work.

160. Pedigree Work and Coumpounding Rations

SENIOR CLASS; COURSE II.

161. Milk and Its Products

JUNIOR CLASS; COURSES I., II.

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pateurization; milk testing; dairy machinery; manufacture of butter, cheese and ice cream, and marketing.

162. Practical Work in Creamery

JUNIOR CLASS; COURSES I., II.

Cream separation and ripening; pasteurization of milk and cream; bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

For descriptions of buildings and equipment, see page 68.

Botany and Bacteriology*Associate Professor House.***171. General Botany**

SOPHOMORE CLASS; COURSE I., TWO TERMS; COURSE II., ONE TERM.

JUNIOR CLASS; COURSE I.

A preliminary course is given under No. 100. In this course the flowering plants are first studied and special attention is given to plant physiology and morphology. Types for study are selected with the view of bringing before the class plants that represent not only important groups, but which are also of considerable economic importance, as the cotton plant, the cowpea plant, etc. The course is general in scope, and the object is to acquaint the student with the general facts of plant life.

In the junior year this course is continued with particular reference to more advanced morphology and taxonomy of the Angiosperms.

172. Elements of Forestry

SENIOR CLASS; COURSE I.

The general principles underlying the practice of forestry are briefly studied and particular attention is given to field work. The taxonomy of the native trees receives considerable attention.

173. General Bacteriology

SENIOR CLASS; COURSES I., II.

The nature and distribution of bacteria, the facts underlying the phenomena of decay and disease, the hygiene of contagious diseases, the elaborate technique of practical work in the science, form the subject matter of the course.

SENIOR CLASS; COURSE IA.

The scope of the work for students in this course is much broader and includes a general training in the use of the microscope and microscopic technique. Particular attention is given to methods in the bacteriological analysis of waters and soils.

174. Plant Pathology

SENIOR CLASS; COURSE I.

The course is devoted to the study of the diseases of economic plants. The class first studies pear blight as a typical disease, producing the disease by inoculation and watching its progress and effects. Other diseases induced by plant parasites are then studied from the systematic standpoint of the parasite. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed.

Mechanical and Electrical Department

Professor Riggs, Director.

Electrical Engineering

Professor Riggs.

Assistant Professor Dargan.

200. Electricity and Magnetism

JUNIOR CLASS; COURSE IV.

Study of the principles of electricity and magnetism, and the elementary design of electro-magnetic mechanism. Wiring calculations, incandescent lighting, etc.

Text-books: Elementary Lessons in Electricity and Magnetism, by Thompson; Elementary Electricity and Magnetism, by Jackson.

201. Electrical Laboratory Practice

JUNIOR CLASS; COURSE IV.

Experimental verification of fundamental electrical laws; measurement of currents, electromotive force, resistance, permeability, capacity, etc.

Reference books: Ayrton's Practical Electricity; Nichol's Physics, Vol. I.; Stewart and Gee's Practical Physics; Henderson's Practical Electricity and Magnetism, Vols. I. and II.

202. Dynamo Electric Machinery

SENIOR CLASS; COURSE IV.

First half session: study and design of direct current dynamo-electric machinery. Second half session: study of alternating currents and their application to light and power. Special attention is directed to polyphase systems and apparatus.

Text-book: Franklin and Esty's Elements of Electrical Engineering; Franklin's Alternating Currents and Alternating Current Machinery.

NOTE.—A complete dynamo design, with full set of drawings, is required as part of course 202 in Electrical Engineering, and course 238 in Mechanical Drawing.

203. Electrical Laboratory

SENIOR CLASS; COURSE IV.

Care, management and testing of arc and incandescent generators, direct current motors, etc. During third term management and test of single and polyphase machinery and apparatus.

Text-book: Electrical Laboratory Notes, by Riggs.

For descriptions of buildings and equipment, see pages 69 and 70.

Mechanical Engineering

*Associate Professor Earle.
Assistant Professor Howard.*

In this course the student is taught the application of his scientific, mathematical and technical knowledge to the design and construction of engineering structures, and of machinery and manufacturing plants in general.

210. Mechanism

JUNIOR CLASS; COURSES III., IV., V., VI.

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicyclic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-book: Stahl and Wood's Mechanism.

211. Mechanics

JUNIOR CLASS; COURSES III., IV., V., VI.

Motion, force, velocity, force systems, moments of force, general principles, and methods of solving problems both analytically and graphically.

212. Mechanics

SENIOR CLASS; COURSES IV., V.

Two hours per week during the first two terms are given to the study of pure mechanics, centre of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Maurer's Technical Mechanics.

213. Mechanical Engineering

SENIOR CLASS; COURSES III., IV., V., VI.

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory and design of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; heating and ventilating systems; transmission of power; engineering specifications and the law of contracts. Theory of the strength of engineering materials. Graphical solution of problems. Hydraulics.

Text-book: Ewing's Steam Engine and other Heat Engines.

214. Mechanical Laboratory

SENIOR CLASS; COURSES IV., V.

Study, use and calibration of water-meters, weirs, steam gages, indicators, dynamometers, calorimeters; efficiency tests of screw-jacks and hoists; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; erecting, lining up and setting the

valves of the plain slide-valve and automatic cut-off steam engines; indicator practice; horse-power and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

215. Mechanical Laboratory

SENIOR CLASS; COURSES III., VI.

Study, use, and calibration of steam gages; indicators; calorimeters; tests of building materials, as iron, wood, brick, cement; erecting, lining up and setting the valves of plain slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps; firing and testing of steam boilers.

Reference books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

For description of equipment, see page 72.

Physics

Associate Professor Poats.

The study of physics is begun in the sophomore year by all regular students, and completed in that year by those students taking courses in agriculture and textile industry. All other regular students take physics, both theoretical and practical, in the junior year.

The instruction is by lectures and recitations, special stress being laid upon principles and facts which are fundamental to the several engineering professions. The lectures and recitations are illustrated by numerous experiments before the class.

In the physical laboratory the student is taught to perform for himself all the experiments of a general laboratory course. The properties of matter, the laws of mechanics, heat, electricity, magnetism, light and sound are verified. Students are required to make accurate and neatly written reports of all experiments.

220. Elementary Physics

SOPHOMORE CLASS; ALL COURSES.

Properties of matter; physical measurements; mechanics of solids and fluids; electricity and magnetism.

Text-book: Carhart and Chute's Physics.

221. Electricity and Magnetism, Heat, Sound and Light

JUNIOR CLASS; COURSES III., IV., V.

Text-books: Carhart and Chute's Physics; Carhart's University Physics.

222. Physical Laboratory

JUNIOR CLASS; COURSES III., IV., V.

Experimental determination of the physical properties of matter and the verification of laws of mechanics; heat; sound; light; electricity and magnetism.

For description of equipment, see page 73.

Drawing and Designing

Associate Professor Lee.
Assistant Professor Klugh.
Instructor Bogard.
Instructor Gardner.

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

230. Freehand Drawing

FRESHMAN CLASS; COURSES III., IV., V., VI.

Graded exercises in sketching from geometrical models, plaster casts, machine parts, and other objects in pencil and ink, particular attention being paid to outlines and perspective.

232. Mechanical Drawing

FRESHMAN CLASS; COURSES III., IV., V., VI.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines, from sketches and models.

233. Mechanical Drawing

FRESHMAN CLASS; COURSES I., II.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings.

234. Mechanical Drawing

SOPHOMORE CLASS; COURSES III., IV., VI.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts.

234a. Mechanical Drawing

SOPHOMORE CLASS; COURSE V.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications; lettering; topographical drawing.

235. Mechanical Drawing

JUNIOR CLASS; COURSE IV.

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel bearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tinting, tracing and blue printing.

236. Mechanical Drawing

JUNIOR CLASS; COURSE V.

First half the same as course 235; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

237. Mechanical Drawing

JUNIOR CLASS; COURSE III.

First half same as course 235. Second half, drawing of furnace designs and other metallurgical appliances.

238. Machine Design

SENIOR CLASS; COURSE IV.

Necessary drawings for work under construction in the shops; details of steam engine and electrical machinery. Design drawing required in graduation thesis.

239. Mechanical Drawing

SENIOR CLASS; COURSE V.

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

239a. Mechanical Drawing

SENIOR CLASS; COURSE VI.

Cam drawing; jacquard tie-ups, etc. This work is done in the Textile School.

For description of equipment, see page 73.

Forge and Foundry

Assistant Professor Gantt.

Assistant Gardner.

240. Forge Work

FRESHMAN CLASS; ALL COURSES.

Study of Buffalo down draft forges; graduated exercises, embracing fundamental operations of forging, such as upsetting, bending, punching, twisting, welding, etc. Part of third term is devoted to working with tool steel, involving processes of annealing, hardening, tempering, etc.

241. Foundry Work

SOPHOMORE CLASS; COURSES III., IV., V., VI.

Names and uses of molders tools; tempering and working of molding sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

242. Forge Work

Study of Buffalo down draft forges. Short course, embracing fundamental operation of forging.

For description of equipment, see page 74.

Machine Shop

Assistant Professor Howard.

250. Machine Shop

JUNIOR CLASS; COURSES IV., V., VI.

Instruction begins at the bench with exercises in chipping, filing, scraping and polishing. Castings and drawings are given the student, and he is required to chip, file, scrape and polish each casting into the exact form and size represented by the corresponding drawing. From bench work the student is advanced to machine work, where he is taught turning, boring, polishing, drilling, threading, planing, milling, grinding, etc., in iron, brass and steel. In all cases the exercises are required to be worked to drawings. The graded course of exercises is designed to teach the fundamental principles and practices of machine metal-work from the simplest to the most difficult operations.

Only a few set exercises are given to teach important fundamental processes. It is the policy of the shop to keep several large machines in process of construction, requiring the students to do the work. Experience has taught that students take greater interest in making parts of a machine that is for actual use than in mere routine exercise work.

251. Machine Shop

SENIOR CLASS; COURSE IV.

The senior year is devoted to a more advanced work in the construction of engines, dynamos, motors and other machines. The student is encouraged to work from his own designs as far as possible, but is guided and directed by the instructor in charge.

For description of equipment, see page 74.

Woodwork

Assistant Professor Hook.

Assistant Gardner.

The course in woodwork does not aim to make the student a skilled workman, but rather to teach the proper use of tools and impress the importance of working to exact dimensions. At the same time, it gives a certain amount of manual dexterity, useful in every vocation.

The course covers two years, beginning with the most elementary principles and advancing gradually by a series of graded exercises to the more complicated instructions where special methods and tools are required. All work is done from working drawings, and commercial shop methods are constantly employed.

260. Woodwork

FRESHMAN CLASS; COURSES III., IV., V., VI.

Use and care of tools; graded exercises in carpentry, joining, wood-turning; construction of articles from working drawings; use of turning lathe and other simple machinery; construction of boxes, desks, etc., involving dove-tailing, gluing, polishing, etc.

261. Woodwork

FRESHMAN CLASS; COURSES I., II.

The work is given for two terms only, and is the same as course 260, except that a study of farm structures, such as fences, gates, houses, etc., is substituted for a part of the work given in course 260.

262. Woodwork—Pattern Making

SOPHOMORE CLASS; COURSES III., IV., V., VI.

Use of wood-working machinery, as planer, jointer, moulder, mortise and tenoning machine, carving and paneling machine, shaper, circular and jig-saws. Pattern work, with graded exercises, illustrating the principles of draft and shrinkage, and teaching the construction of core prints, core boxes, etc. Patterns for machines under construction. Cabinet work, and furniture construction, as chairs, desks, book-cases, hall stands, etc.

For description of equipment, see page 75.

Chemical Department

Professor Hardin, Director.

Chemistry and Metallurgy

Professor Hardin.

Associate Professor Brackett.

Assistant Professor Shiver.

Assistant Professor Henry.

300. General Chemistry

SOPHOMORE CLASS; ALL COURSES.

In organic chemistry and the leading facts and principles of organic chemistry. 1st term, non-metals; 2d term, metals; 3d terms, organic chemistry.

Text-book: Roscoe's Elementary Chemistry.

301. Chemical Laboratory

SOPHOMORE CLASS; ALL COURSES.

Introductory work and qualitative analysis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. Industrial Chemistry

JUNIOR CLASS; COURSES I., II., III.

The applications of chemistry in the more important arts and manufactures. Among the subjects studied are: Sulphuric acid; soda; chlorine; potash salts; fertilizers; lime, mortar, and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. Chemical Laboratory

JUNIOR CLASS; COURSES I., II., III., VI.

Qualitative and quantitative analysis. A short course in assaying is given in the agricultural courses, and a fuller course in assaying in the metallurgical course.

Books used: Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Notes on Assaying.

304. Agricultural Chemistry

SENIOR CLASS; COURSES I., II.

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the com-

position and manufacture of fertilizers, the composition of feeding-stuffs and of dairy products.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman.

305. Chemical Laboratory

SENIOR CLASS; COURSES I., II.

Quantitative analysis of fertilizers, soils, ashes of plants, water, cattle-foods and dairy products.

Books used: Bulletins of U. S. Department of Agriculture, containing methods of analysis adopted by the Association of Official Agricultural Chemists.

306. Physical Chemistry; History of Chemistry

SENIOR CLASS; COURSE III.

Text-books: VanDeventer's Physical Chemistry; Venable's History of Chemistry.

310. Metallurgy

SENIOR CLASS; COURSE III.

Text-book: Sexton's Elementary Text-book of Metallurgy.

311. Chemical and Metallurgical Laboratory

SENIOR CLASS; COURSE III.

For descriptions of buildings and equipment, see pages 67 and 76.

Department of Textile Industry

Professor Doggett, Director.

Details of Instruction

In carding and spinning, after the subject of raw material has been completed, machinery and processes used in the production of cotton yarns will be taken up systematically, going into a detailed examination and explanation of the separate machines and the mechanisms peculiar to them. Calculations for making changes of gears, speeds, production, etc., and practical operation of each machine will be required.

In designing, instruction begins with explanations of the principles of representing weaves on design paper, after which the designing of plain simple weaves, laying out of harness drafts, pegging plans, etc., are taken up, advancing into the designing of more complicated weaves usually made on harness. After the completion of harness weaves the time will be devoted to designing of Jacquard weaves and tying up of Jacquards. The aim of the instruction in designing will be to develop originality in the student.

The practical work in weaving is laid out to parallel the instruction in designing. The first part of the instruction in this work will be on hand looms. After the completion of that amount of work required on hand looms, the student is advanced to plain and fancy

power looms, where in addition to the practical operation of weaving, the loom will be analyzed and explained in detail, together with timing and setting all working parts. The latter part of this work will be on Jacquards.

Cloth analysis consists in dissecting samples of various kinds of cloth to ascertain the weave, texture, weight per yard, and the counts of yarn used in its construction. The students are required to reproduce some of these patterns on the looms of the school.

The work in textile chemistry and dyeing covers inorganic quantitative analysis; the general principles of organic chemistry, with special reference to the coloring matters; the preparation of mordants and dyes, and the application of them to the several textile fibres.

Mill construction, ventilation and fire protection will be discussed. Also the organization and relations of the various departments of an industrial establishment, the determination of costs of production and of the effect on costs of different systems of distributing indirect expenses. As occasion offers, addresses will be given by men of prominence who are interested in the cotton industry or in the manufacture of mill machinery.

Care is taken to develop accuracy in observation, neatness and clearness in written reports; and to this end each student is required to submit a comprehensive report—including the necessary notes and references from standard works on the subjects—of every experiment performed by him. By this method each student is able to verify for himself in the laboratory, the truth of the principle stated to him in the class room.

Each student will be required to submit an organization and a list of the machinery equipment, for several different sizes of mills, making different classes of products.

In all the divisions of this department, the lecture work, so far as is necessary, will be illustrated with drawings and lantern slides.

Carding and Spinning

Assistant Professor Earle.

400. Raw Material

JUNIOR CLASS; COURSE VI.

That the manipulation of cotton fibres may be carried out successfully, under various conditions, it is essential that the characteristics peculiar to the cotton fibre should be understood. Therefore, the introductory work of the students of this department is to examine the physical properties of cotton fibres, to ascertain their lengths of staple, spinning qualities, color, harshness and softness, and to determine their suitability for making various kinds of yarns, filling, warp, ply yarns, etc. This study of fibres will not be limited to American cottons, but will include the more important commercial cottons of the world. The effects of temperature and humidity on fibres will be fully discussed. Also the handling of cotton prior to manufacturing processes, together with the injury to cotton fibres therefrom.

401. Opening and Mixing

JUNIOR CLASS; COURSE VI.

Beneficial effects of opening and airing cotton; length of time to air for best results; effects on resultant yarn if not properly opened; necessity of mixing; when to mix cottons and methods of carrying out same; effects of improper mixing; effects of a judicious mixing on the after processes of manufacture; reasons for blending; effects of blending cottons on the resultant yarn, for strength, appearance, cost, etc.; effects on finished products if cottons are not properly mixed or blended.

402. Picker Room

JUNIOR CLASS; COURSE VI.

Proper situation of picker room; arrangement of machinery in same; automatic feeder; purpose for which used; construction, adjustment of parts, etc.; action on cotton; manner of connecting them to breaker lappers with and without dust trunks; advantages of dust trunk; facilitating good results by proper care; breaker lapper, use, explanation of parts, beaters used, adjustment of working parts and experimenting with different speeds of beater; intermediate and finisher lappers, necessity of using same, construction, speeds, care of beaters, kinds of beaters, speeds of beater for different lengths of staple; evener motion and its control of feed rolls; adjustment of grids to regulate amount of waste, disposition of waste; regulation of air current; effects of air current on proper working of the lapper; lap formation; calculation on above machines for drafts, length of lap, etc.

403. Carding

JUNIOR CLASS; COURSE VI.

Purpose of carding; principle upon which cards are built; comparison of types of cards; explanation of purpose and construction of feed plate, lick-in, cylinder, flats, screens, doffer, coiler head, etc.; different settings of cards to produce best results on different lengths and qualities of fibre; regulation of waste; amount of draft; grinding; effects of improper grinding on card clothing and fibre; calculations for changing gears and speeds of various working parts.

404. Railway Heads and Drawing Frames

JUNIOR CLASS; COURSE VI.

Purpose, use, construction, advantages and disadvantages of railway heads; explanation of stop motions, evener; principle of drawing slivers; purpose of drawing frame; comparing work of leather covered and metallic rolls; adjustment of rolls; distribution of draft between the rolls; speeds, stop motions; all calculations on above machines, drafts, production, etc.

405. Fly Frames

SENIOR CLASS; COURSE VI.

Slubber, intermediate, fine roving and jack frames; construction, care and operation of the modern fly frame; bobbin and flyer lead

machines; advantages of the bobbin lead; detailed explanation of working parts, differential motion, horse head, builder, full bobbin stop motion, etc.; adjustment of drawing rolls; calculations for draft, twist, lay, tension and other gears.

406. Yarn Manipulation

SENIOR CLASS; COURSE VI.

In this branch of work is included twisting; reeling; bundling; spooling; beaming. The slasher, construction and use; necessity for sizing; creels, cylinders, size boxes, etc.; mixing of size; different sizing ingredients for special purposes; method of preparing warps for the slasher; various calculations regarding each of the above processes.

407. Combing

SENIOR CLASS; COURSE VI.

Sliver lap machine, its construction, use, etc.; care and operation; leather covered rolls; metallic rolls; ribbon lap machine, its construction, use, etc.; advantages of using same; care and operation; lap formation; combing machine, its use, care and operation; detailed explanation of working parts, cylinder, half laps, segments, detaching rolls, etc.; with rules for adjusting and timing same; regulation of waste made; necessity of the process; relation of the process to fine smooth yarns; practical experience in adjusting above machines; calculations for change gears, etc.

408. Spinning Frames

SENIOR CLASS; COURSE VI.

Construction of the modern ring spinning frames; purpose of ring spinning; discussion of its principal parts; rings and ring holders; various types of spindles in use; speed of spindles; weights, sizes and speeds of travellers; warp, filling and combination builder motions; speeds and settings of rolls for different lengths of staple; effects of twist on the strength, color and elasticity of yarns; calculations for draft, twist, production and various constants.

409. Spinning Mules

SENIOR CLASS; COURSE VI.

Construction and operation of the self-acting spinning mule; special features; description of the head stock; cam shaft, copping rail, nosing motion, easing motion, jacking motion, twisting at the head, etc.; different movements in the mule and timing of the same; formation of a cop; characteristics and uses of mule spun yarn; calculations for draft, twist, builder gear, etc.

Text and Reference Books: Nasmith's Student cotton Spinner; Tompkins' Cotton Mill Processes and Calculations; Taggart's Cotton Spinning; Monie's Sizing and Sizing Compounds.

For description of equipment, see page 79.

Weaving and Designing

Assistant Professor McSwain.

410. Hand Loom Weaving

JUNIOR CLASS; COURSE VI.

The first practical work in weaving is on the hand loom. These hand looms have 4x4 box motion and 30 harness dobbies. After the design and necessary calculations have been made the student proceeds with dressing, drawing-in, reeding, tying the warp in loom, building harness chain and starting up loom; producing different weave effects from the same drawing-in draft by changing the harness chain; using box motions for color effects; combining two or more systems of filling with one system of warp, two or more systems of warp with one system of filling, two or more systems of warp with two or more systems of filling to produce figured fabrics of a special character; explanation of the different methods used in raising and lowering the harness.

411. Power Loom Weaving

JUNIOR AND SENIOR CLASSES; COURSE VI.

Power loom weaving will be taken up after the student has finished the required amount of hand loom work and will include a study of the plain or cam loom; cam motions used for raising and lowering the harness, such as the under cam, side cam, etc.; setting cams; sketching cams to produce a given motion; arrangement of strapping for two, three, four and five harness; timing cams to suit the number of harness used; speed of different width looms on the same class of fabrics; selection of temples and measurements for same; Draper loom; warp stop motion, filling change mechanism, etc.; the dobby analyzed and explained; methods of shedding; head motions; harness chains for single and double index dobbies; chains for head motions; explanation of box motions, four by one, four by four box, etc.; building box motion chains; explanation of multipliers used on box motions and harness motions; let-off motions, Morton, Bartlett, Shepard, and friction let-offs; open and closed shed machines explained; single and double index dobbies, etc.

412. Designing

JUNIOR AND SENIOR CLASSES; COURSE VI.

Purpose of designing, explanation of "warp" and "filling;" representing weaves on design paper; foundation weaves; plain or cotton weaves; weaves derived from plain weaves, such as rib and basket weaves; twill weaves and methods of construction; derivative weave from twills, such as broken, steep, skip, reclining and curved twills; corkscrew twills, entwining twills; satin weave and the purpose of same; weaves derived from satins, such as double satins and granites; shading of satins; figured effects produced by using warp and filling satins; color effects produced by using two or more colors in the above fabrics; methods of constructing granite weaves; points to be

considered in combination weaves; special weaves; honey combs, gauze and imitation gauze, bedford cord, plain and fancy piques, matelasses, etc.; two systems of warp and one system of filling, or two systems of filling and one system of warp for the purpose of figuring; explanation of double cloth, purposes, and class of fabrics in which generally used; representing double cloth weave on design paper; use of different proportions of "back" and "face" for special effects; methods of stitching double cloth so that the stitching will produce a figuring effect; stitching so that it will not show either on "face" or "back" of cloth; leno weaves and method of representing on design paper; methods of making drawing-in drafts, plain and fancy drafts, point, skip, mixed or cross draws; chain drafts; rules for finding the number of heddles required for each harness; methods used in reducing weaves to the lowest number of harness.

413. Jacquard Designing

SENIOR CLASS; COURSE VI.

Explanation of the various Jacquard machines; methods of shedding, such as the rise and drop, single lift, double lift machines; single and double cylinder machine; open and closed shed machine; drawing of tie-ups, straight tie-up, both in French and English system, point tie-up, combination tie-up for special goods, as table damask, Marseilles quilts, etc.; practical operation of tying-up a Jacquard, cutting leashes, threading of comber board, tying on and leveling up mail eyes; figuring comber board for a given texture of goods; casting out hooks to reduce texture of goods without retying the harness, cutting and lacing cards for a given design; selection of design paper for different fabrics, with regard to picks and ends per inch used; methods used in laying out the figure for a Jacquard design; enlarging the sketch for design paper. Instruction will also be given in the principles of special weaves, such as swivel weaving, lappet weaving, chenille and pile fabrics as used for rugs, carpets, etc. The harmony and contrast of colors will also be discussed.

414. Cloth Analysis

SENIOR CLASS; COURSE VI.

Methods of arranging cloth sample for analysis; figuring the counts of cotton, woolen, worsted, and silk yarns; calculations for converting one system of yarn into that of another; finding the weight of cloth per yard and the counts of yarn used in its construction from the analysis; figuring width of warp in reed and number of reed to use to produce a given width and texture when woven; calculations to determine the cost of producing a fabric having given values of material, labor, counts, picks and ends per inch, weight per yard, etc.

This work takes up all representative classes of weaves that can be woven on harness, and gives the student a thorough knowledge of figuring yarns, weight of cloth, ends and picks per inch, etc.

Reference Books: Ivey's Loom Fixing; Fox's Mechanism of Weaving; Posselt's Technology of Textile Designs; Holmes' Cotton Cloth Designing.

For description of equipment, see page 79.

Textile Chemistry and Dyeing

Professor Doggett.

420. Textile Chemistry

JUNIOR CLASS; COURSE VI.

To the qualitative and quantitative analysis of the general course is added a course of lectures in inorganic chemistry especially relating to the materials used in the various textile processes of mordanting, fixing, scouring, bleaching, etc. Also lectures on organic chemistry, taking up as much of the aliphatic series as is necessary for an understanding of the chemical reactions involved in the application of these compounds to textile operations, and to prepare the student for the study of the aromatic compounds. Toward the end of the year the discussion of the simpler aromatic compounds is begun as an introduction to the special work on synthetic dyestuffs in the senior year.

The laboratory work will include the preparation of typical compounds of each class of derivatives taken up in the lectures.

421. Dyeing

SENIOR CLASS; COURSE VI.

A course of lectures is given which covers that portion of the aromatic series which has reference to the study of the principal synthetic dyestuffs. The laboratory work consists of the preparation of certain typical dyestuffs and the study of their reactions. A complete written report of each experiment is required of the student, and written reviews are given each month on the subjects covered in the lectures and laboratory work. The purpose of the course is to give the student an understanding of the chemistry of the operations by which coal tar products are separated, purified and converted into dyestuffs.

A course of lectures is also given on the application of the different classes of dyestuffs to the various fibres, together with the chemical and physical properties of the latter; bleaching and mercerizing of cotton yarns and cloth; scouring and bleaching of wool; the manufacture of artificial silk; calico printing, etc. In the laboratory the dyeing of cotton and wool is carried on in an experimental way, a study being made of typical dyestuffs of each of the principal classes. In the dye-house the dyeing of larger quantities of cotton and wool is carried on, as well as the bleaching and mercerizing of cotton, scouring and bleaching of wool, and the printing of calico.

The student is required to make a written report of each experiment performed, accompanied by samples of the dye material, which have been subjected to the action of various agencies, such as light, acids, alkalies, etc.

The purpose of this training, taken in connection with the work preceding it, is to serve as an introduction to the work of the practical dyer, and to prepare the student for the position of chemist in textile establishments. The constant aim of the instruction is to point out the chemical reactions at the foundation of the above textile operations, so that the student going into practical work in the mills, will

have at his command scientific knowledge sufficient to enable him to study intelligently such problems as may come before him in his line of work.

Reference Books: Richter's Organic Chemistry; Bernthsen's Organic Chemistry; Holleman's Organic Chemistry; Allen's Commercial Organic Analysis; Heermann's Dyer's Materials; Schultz & Julius' Organic Coloring Matters; Georgievics' Chemical Technology of Textile Fibres; Georgievics' Chemistry of Dyestuffs; Kenecht, Rawson & Lowenthal's Manual of Dyeing; Beech's Dyeing of Cotton Fabrics; Hummel's Dyeing of Textile Fabrics; Frap's Principles of Dyeing.

For description of equipment, see page 81.

Academic Department

English

Professor Furman.

Associate Professor Daniel.

Assistant Professors Keitt, Bryan, Bradley.

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

500. English Grammar and Word Studies

PREPARATORY CLASS.

This class is carefully prepared for entry upon the work of this College, several of the professors in English having charge of its sections. The intention is to make the English course continuous, so that there may be no break between the preparatory and freshman work, either in teachers or text-books. The books used in Preparatory class are: Buehler's Grammar, Gilbert's Studies in Words, and such reading texts as may from time to time be selected by the instructors. Special attention is paid to spelling, definition of words, oral reading, and written exercises.

501. English Grammar, Reading and Composition

FRESHMAN CLASS; ALL COURSES.

A review of the subject of grammar introduces the work of this class. Constant drill is given in theme writing; pupils being expected to make use of the College library under direction of instructors. Methods of using dictionaries, encyclopedias, and other reference books are explained practically to the students. Full supplementary readings are required, and practice is given in the writing of abstracts of books so read.

Text-books: Emerson-Lockwood's Lessons in English; Buehler's Practical Exercises in English; Webster's School Dictionary; and such English classics as may be assigned.

502. Rhetoric, Composition, American Literature

SOPHOMORE CLASS; ALL COURSES.

The study of rhetoric is pursued throughout the year. Constant theme writing is required. To supplement the work in composition, a brief course in American Literature is given, and parallel readings from American authors are assigned.

The text-books are Espenshade's Composition and Rhetoric, and Noble's Studies in American Literature. The parallel reading for 1906-07 consisted of Franklin's Autobiography, Irving's Alhambra,

Cooper's Spy, Hayne's Speech (in the Hayne-Webster debate), Emerson's Nature, Lumell's My Garden Acquaintance, Hawthorne's Scarlet Letter, Selections from the poems of Bryant, Poe, Longfellow, Holmes, Whittier, Lowell, Lanier, and minor Southern poets.

503. English Literature

JUNIOR CLASS; ALL COURSES.

The work in the Junior class begins with the critical study of Macaulay as an essayist. This is followed by a general course in English literature. Pancost's English Literature is the text-book—this work being supplemented by lectures. Monthly essays are required, and frequent oral readings, embracing selections from the principal English authors from Chaucer to the present time.

504. Studies in Shakespeare

SENIOR CLASS; ALL COURSES.

This class is given instruction in the principles of literary criticism. A somewhat full course in Shakespeare study is furnished. Several plays are read in class—the students being orally examined on all questions, grammatical, historical, and ethical, which arises in the study of this author. Monthly essays are required.

History and Political Economy

Professor Morrison.

The course includes history of the United States, South Carolina history, general history, commercial geography, and political economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The class-room is supplied with globes, charts, maps and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College library.

The history of South Carolina and the history of the South receive special attention. "A people which takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

510. United States History

PREPARATORY CLASS.

Text-book: A School History of the United States, by White.

511. South Carolina History

FRESHMAN CLASS; ALL COURSES.

Text-book: Weber's History of South Carolina.

512. Commercial Geography

FRESHMAN CLASS; ALL COURSES.

Text-book: Olin's Commercial Geography.**513. General History**

SOPHOMORE CLASS; COURSES III., IV., V., VI.

JUNIOR CLASS; COURSES I. AND II.

Text-book: Anderson's New General History.**514. Civics**

SOPHOMORE CLASS; COURSES III., IV., V., VI.

JUNIOR CLASS; COURSES I. AND II.

Text-book: Clark's Government.**515. Political Economy**

SENIOR CLASS; ALL COURSES.

Text-book: Gide's Principles of Political Economy, second American edition (1904).**Mathematics***Professor Brodie.**Associate Professor Martin.**Assistant Professors Houston, Shanklin, Hunter.*

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics. (See requirements for admission, pages 24 and 25.)

520. Algebra

FRESHMAN CLASS; ALL COURSES.

Review of involution, evolution, theory of indices and quadratics; simple indeterminate equations; inequalities; proportion and variation; logarithms.

*Well's Text-book in Algebra.***521. Geometry**

FRESHMAN CLASS; ALL COURSES.

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles. Plane and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume. Special attention is given to the formation, on the part of students, of the habit of clear and accurate reasoning and concise expression.

Text-book: Bush and Clarke's Geometry.

522. Trigonometry

SOPHOMORE CLASS; ALL COURSES.

Measurements of angles; trigonometric functions; right triangle; goniometry; relations between functions of one angle; functions of multiple angles; inverse functions; trigonometric equations; oblique triangles; De Moivre's theorem; spherical trigonometry; general formulas; right spherical triangle; oblique spherical triangle; applications.

Text-book: Well's Plane and Spherical Trigonometry.

523. Descriptive Geometry

SOPHOMORE CLASS; COURSES III., IV., V., VI.

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; shades, shadows and perspective; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive Geometry.

524. Higher Algebra

SOPHOMORE CLASS; COURSES III., IV., V., VI.

Progressions; binomial theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-book in Algebra.

515. Analytic Geometry

SOPHOMORE CLASS; COURSES III., IV., V., VI.

JUNIOR CLASS; COURSES IV., V., VI.

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of second degree involving two variables; higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Tanner and Allen's Analytic Geometry.

526. Differential Calculus

JUNIOR CLASS; COURSES IV., V., VI.

Differentiation of algebraic functions; transcendental functions; successive differentiation and development of functions; functions of two variables; tangents and asymptotes; maxima and minima; radius of curvature; evolutes and involutes; envelopes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

527. Integral Calculus

JUNIOR CLASS; COURSES IV., V., VI.

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of

two variables; lengths of curves; areas of plane curves; rectification of curves; cubature of volumes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

Civil Engineering

(Included in the Division of Mathematics.)

530. Plane Surveying

SOPHOMORE CLASS; ALL COURSES.

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the areas are computed and plats are drawn. Experience is given in problems of laying out and dividing up land, and in locating irregular boundaries. Practice is also had in section and differential levelling.

Text-book: Raymond's Plane Surveying.

531. Higher Surveying

JUNIOR CLASS; COURSE V.

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; goegetic surveying; map and plan drawing; topographical symbols, etc.

Text-book: Johnson's Surveying.

532. Highway Engineering

JUNIOR CLASS; COURSE V.

Location, construction and maintenance of country roads and city streets; advantages of various materials for road covering; effects of grades and surface upon the cost of transportation; plans and specifications; practical problems in change of grade and relocation from surveys of existing roads.

Text-book: Spalding's Roads, Streets and Pavements.

533. Railway Engineering

JUNIOR CLASS; COURSE V.

Preliminary and location surveys; location from contour map; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches; turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

Text-book: Webb's Railway Construction.

534. Rural Engineering

JUNIOR CLASS; COURSES I., II.

This course is arranged with special view to the needs of the agricultural students. Among the subjects taught are: Farm surveying;

laying out and dividing up land; land drainage, including surface-drainage, under-drainage, and hill-side ditching and terracing. Road engineering, a practical course in road making and maintenance, with special reference to conditions in South Carolina. The principles underlying grade and surface resistance, drainage, surfacing, and the best methods of construction are carefully studied. The instruction in the class-room is supplemented by a liberal amount of field practice.

Text-books: Gillespie's Manual of Road-making; Elliott's Farm Drainage.

535. Railway Engineering

SENIOR CLASS; COURSE V.

Surveys are made for a line of railway a mile or more in length; the necessary plans, profiles and cross-sections are prepared; grades are determined, curves laid out, slope stakes set, and all the needed measurements made to enable the student to complete the excavations and embankments, and to estimate the cost of construction.

Text-book: Webb's Railway Construction.

536. Structural Engineering

SENIOR CLASS; COURSE V.

Building materials; mechanics of construction; derivation of practical formulas; masonry; foundations on land and in water; stability of walls and arches; analytical and graphical investigation of stresses in plate girders, Howe, Pratt, Warren and other types of highway and railroad bridges, and various forms of roof trusses; bridge design.

Text-books: Fiebeger's Civil Engineering; Merriman and Jacoby's Roofs and Bridges, Parts I. and III.

537. Hydraulic Engineering

SENIOR CLASS; COURSE V.

Hydrostatics; efflux; resistance and work of liquids; motion of water in pipes and open channels; derivation of practical formulas; hydrostatic and hydraulic machinery; determination of discharge of stream; head and available power; form and dimensions of pond or reservoir; detailed topography of dam site; determination of form and dimensions for stability of dams; preparation of plans and specifications; lectures on water-supply engineering.

Text and Reference Books: Merriman's Hydraulics, Frizel's Water-Power; Wegmann's Construction of Dams; Folwell's Water Supply Engineering.

For description of equipment, see page 82.

Modern Languages

Professor Doggett.

The courses in German and French are designed to give the student general training and culture and to enable him to make use of the languages as an instrument in scientific research.

The course in French is now being arranged.

540. German

JUNIOR CLASS; COURSES I., II., VI.

The Essentials of German Grammar; collateral reading; translation of easy German prose; German prose composition.

Text-books: Thomas' Practical German Grammar; Thomas and Hervey's German Reader; Ball's German Drill Book; Storm's Im-mensee; Gerstacker's Germerhausen; Howe's German Prose Composition.

541.

JUNIOR CLASS; COURSES I., II., VI.

German Syntax; Study of German Idioms and Prefixes; German prose and easy poetry; Scientific German; translation at sight from German current literature and scientific periodicals.

Text-books: Jagemann's Elements of German Syntax; von Saar's Die Steinklopfer; Schiller's Maria Stuart; Brandt and Day's German Scientific Reading. *Reference-books:* Curme's Grammar of the German Language; Heath's German Dictionary.

Military Department

*Captain Clay, U. S. Army, Retired, Director.
Commandant of Cadets.*

Military Science and Tactics

Captain Clay.

The course in military instruction, as prescribed and followed, is both theoretical and practical.

600. Tactics and Elements of Military Science

JUNIOR CLASS; ALL COURSES.

The theoretical instruction, given by recitations and lectures, includes the following, as prescribed by the War Department: The Infantry Drill Regulations, including the School of the Battalion in both close and extended order; the Manual of Guard Duty.

601. Military Science

SENIOR CLASS; ALL COURSES.

Small-arms Firing Regulations; the Articles of War, with special reference to articles 4, 8, 15, 20, 21, 22, 23, 24, 32, 38, 39, 40, 42, 44, 46, 47, 50, 55, 57, 61, and 65. Also the following records: Enlistment and discharge papers, including descriptive lists; morning reports; field and monthly returns; muster rolls; rosters; ration returns; requisitions; property returns.

In addition, ten lectures are given each year upon the following subjects: Two lectures on the organization of the United States Army; one lecture on patrols and outposts; one lecture on marches; one lecture on camps and camp hygiene; three lectures on lines and bases of operations; two lectures on the attack and defense of advance and rear guards, and outposts and convoys.

The articles of war specifically mentioned are among the most important for the young officer to know on first entering service. The records for study should be thoroughly understood by all graduating cadets, because they show how the soldier enters and leaves the service; how he is accounted for, paid, fed, clothed, armed; and how his military duties are regulated.

602. Military Drill

REQUIRED OF ALL CADETS.

Drill regulations, including the school of the battalion through close and extended order; advance and rear guards and outposts; marches; the ceremonies of battalion review, inspection, parades, guard mounting, and escort of the colors; infantry target practice; instruction in first aid to the injured; guard duty.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

ORGANIZATION AND MODE OF
GOVERNMENT
GENERAL INFORMATION

Organization and Mode of Government

The following extracts from the book of "Regulations" explain the organization and mode of government of the corps:

Organization

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothing, equipments, etc., shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc., of the cadets at least once each week, and make a report thereon to the President."

"3. For instruction in tactics and for military police and discipline the corps of cadets will be organized into one or more battalions of two or more companies each, and a band when practicable. In case the number of the cadets will permit of the formation of two or more battalions, the organization will be regimental."

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties and most exemplary in their general deport-

ment. As a rule the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

"5. The field and staff shall consist of two cadet majors, two cadet lieutenants and adjutants, one cadet captain and adjutant, one cadet captain and quartermaster. The non-commissioned staff shall consist of one regimental sergeant-major, one regimental quartermaster-sergeant, two battalion sergeant-majors, and one regimental color sergeant."

"6. In each company there shall be one captain, two lieutenants, one first sergeant, one company quartermaster-sergeant, and as many sergeants and corporals as may be required."

"7. Each of the battalions will be commanded, when on drill, and at such other times as the Commandant of Cadets shall direct, by its Cadet Major."

"8. On the graduation of every class the Commandant of Cadets shall obtain the names of such cadets as shall have shown special aptitude for military service, and furnish a list thereof to the Adjutant General of the State for his information. A copy of this list will also be sent to the Adjutant General of the United States Army, and the names of the three most distinguished students in military science and tactics, will, when graduated, be inserted in the United States Army Register."

Leave of Absence

Communications from parents, requesting leave of absence from the College for their sons, must be addressed directly to the President and not through the cadets.

The rules governing in cases of permits to visit home during the session of the College require that cadets who have accumulated more than eight demerits in any one term, and who have fallen below grade two in their studies

on any report, will not be allowed to leave College during the term except in cases of extreme sickness or death in the family.

No leave of absence or honorary discharge will be granted after May 1st, except for serious causes.

Students who have been granted leave of absence and who stay over the date allowed, unless for sickness or other good and valid reasons, will be required to pay again the incidental fee of \$5.00 before they will be permitted to continue their studies. In case of sickness, a certificate from the attending physician must be submitted to the President.

General Regulations

In addition to the special regulations of the military department, a copy of which is given each cadet, the following general regulations are enforced.

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks, except those who live with their parents or relatives near enough to attend from their homes.

Each student is required to purchase the prescribed uniform, also a pair of over-shoes and a water-proof coat. Students may provide themselves with such work-clothes as they desire.

Those occupying a room are consulted before another student is assigned to that room. A student not satisfied with his room-mate has the privilege of applying for permission to move to another room, and such applications are granted when practicable.

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

The practice known as hazing is positively forbidden. All cadets, upon matriculation, shall be required to sign a

pledge not to indulge in hazing or injuring in any form the person of any cadet or give countenance or encouragement thereto while a member of the corps of cadets. Any cadet indulging in this practice will be dismissed from the College.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

If any cadet shall consider himself wronged by another, or by an officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

Cadets are forbidden to keep any fire-arms or other weapons in their possession not issued by the proper authority.

Any cadet receiving 66 demerits during a College term shall be brought before the Discipline Committee and shall be dismissed or less severely punished.

Any cadet who leaves barracks without authority between retreat and reveille shall be dismissed.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Cadets who receive no demerits during any calendar month will be given a credit of eight to be applied in removing any demerits they may have had charged against them during any preceding months of that term.

Religious Exercises

Chapel Services.—There is preaching in Memorial Hall every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning

by the President and members of the Faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday School, at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

Mr. Legate, a general Y. M. C. A. Secretary, is kept here by the organization and devotes his whole time to the work. This is a voluntary organization of the students. Any student who is a member of an evangelical church may become an active member. Any student of good moral character or who desires to improve his moral life may become an associate member. Any friend of the Association may become a sustaining member by paying \$5.00 or more annually.

The Association has a large, well-arranged hall on the third floor of the College building. Two regular meetings are held each week. The mid-week prayer service is conducted by the students. The meetings on Sunday evening are conducted by Faculty members, ministers and others. At this service, the entire student body, members of the Faculty and other friends are always welcome.

Possibly the largest work of the Association is its Bible Study. This is the only systematic course of Bible instruction in the college. There were seventeen groups the past year. Each group is led by a student. The work is under the immediate supervision of the General Secretary of the Association. Every student, whether a member of the Association or not, should be a member of some group. Attendance at these classes is entirely voluntary. All students are urged to take one of the courses.

The following courses are offered:

Preparatory Course.—The Life and Works of Jesus, According to St. Mark.—By W. D. Murray.

An introductory course on the Life of Christ less difficult than those in the college cycle. For daily personal study.

Freshman Course.—Studies in the Life of Jesus Christ.—By Edward I. Bosworth.

These Bible studies, recently issued, are arranged for practical daily use, and have already found much favor among college men.

Sophomore Course.—Studies in the Acts and Epistles.—By Edward I. Bosworth.

Based on the "Records and Letters of the Apostolic Age," by Ernest De Witt Burton, and arranged for daily personal study.

Junior Course.—Studies in Old Testament Characters.—By Wilbert Webster White.

A revised edition of this standard book on Old Testament Characters, based on the same outline, but requiring less work of the student than the previous edition. Arranged for daily study.

Courses in Mission Study will also be offered.

Churches.—Episcopalian and Presbyterian churches are located near the College, and a number of students attend their Sunday Schools and preaching services.

Care of the Sick

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College hospital. In case of necessity, students are allowed to consult the Surgeon at any time, or send for him, as may be required.

Parents will be kept fully informed of the condition of sick students. The Surgeon, however, cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. Parents may always rest assured that they will be promptly notified of sickness of any consequence; and in case of serious illness the Surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and, when practicable, students are employed in this work, and are paid at the rate of eight cents an hour. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbian and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay-writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly on Saturday evenings. An annual contest is also held by each society at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera-chairs, and are maintained entirely by the students. A small fee is charged for initiation, and there are also monthly dues of a few cents to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman University, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications by the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An annual, an illustrated volume, is published under the auspices of the senior class.

There is also "*The Tiger*" published bi-weekly, being devoted largely to athletics.

Science Club

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the Faculty and advanced students of the College.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These

lectures are delivered in Memorial Hall, at a cost to students of \$1.00 for the course. During the session of 1906-1907 the following lectures and concretes were given:

1. International Grand Concert Co.....	Oct. 4
2. The Old Homestead Male Quartette.....	Oct. 27
3. Leland Powers	Nov. 14
4. Lyman Abbott	Dec. 7
5. The Romeo Frick Concert Co.....	Jan. 26
6. Geo. R. Wendling	Feb. 23
7. Victor's Venetian Band.....	April 6
8. Parland Newhall Quartette.....	April 27

Cadet Exchange

A Cadet Exchange is maintained, where students may purchase at wholesale prices necessary articles, such as books, stationery, collars, cuffs, underwear, etc.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football and baseball are the most popular games, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturdays, to play intercollegiate games.

Athletic Council.—The Southern Intercollegiate Athletic Association, of which the College is a member, has placed the athletic interests of each college under the supervision of an Athletic Council, consisting of members of the Faculty and of the student body. This council consists of nine members—two members of the Faculty selected by the students for president and secretary-treasurer, respectively, three members of the Faculty chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the next college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work; that is, work of a higher grade than is given in the regular college courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

4. No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

5. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Committee, shall be allowed to participate in match games during the next three college terms.

6. That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

7. A student taking a class over is allowed to play, provided, he passes in the first and second terms without any failures, and is otherwise eligible.

8. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

9. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the Chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

Field Day.—May 1st is observed as a holiday for contests in track and field athletics, such as running, hurdling, high and broad jumping, pole-vaulting, hammer-throwing, putting the shot, etc., and is known as "Field Day."

Donations

Mechanical Department.

Keuffel & Esser Co., New York.—One 80-inch slide rule.

Lunkenheimer Co., Cincinnati, O.—Sections of valves and injector.

The Continental Iron Works, New York.—Section model of internal furnace boiler.

Textile Department.

The A. T. Atherton Machine Co., Pawtucket, R. I.—One automatic feeder; one finisher lapper; one lot lap rods; half value on breaker lapper.

Saco & Pettee Machine Co., Newton Upper Falls, Mass.—One 40-in. revolving top flat card; one Entwistle traverse grinder; one Entwistle drum grinder; one bur-nisher; one set carder's tools; one improved railway head, with back, front and full can stop motion; one 4 delivery draw frame, with back, front and full can stop motion, fitted with single preventer rolls; one 40 spindle slubber; one 60 spindle intermediate roving frame; one 80 spindle fine roving frame; one 128 spindle combination warp and filling ring spinning frame; one 72 spindle improved spooler. A sufficient number of gears were sent with these machines to make various changes that may be necessary.

Mason Machine Works, Taunton, Mass.—One 40-in. revolving top flat card; one Entwistle drum grinder; one stripper brush; one set carders' tools; one railway head, with back, front and full can stop motion; one 4 delivery draw frame, with back, front and full can stop motion, fitted with single preventer roll; one 112 spindle combination warp and filling ring spinning frame; one 40-in. plain loom; one 36-in. fancy cotton loom; one 36-in. 24 harness dobby loom; half value on combing machinery. All necessary gears with these machines to make the required changes.

The D. A. Tompkins Co., Charlotte, N. C.—One adjustable reel; one draw-in frame; one loom box; one doffer box; two section beams; one switch board, complete; one emery wheel and stand; one band machine; one saw tooth model gin; one spike tooth model gin.

Draper Co., Hopedale, Mass.—One 40-in. Northrop loom; one 28-in. Northrop loom; one 48 spindle combination wet and dry twister; one 40 spindle spooler; one section warper; one ball warper; one Rhodes' banding machine, with Watt's patent marking device; section beams; temples as required; loom findings.

Crompton & Knowles Loom Works, Providence, R. I.—Half value on following: One 32-in. loom, with 416 hook Jacquard; one 32-in. loom, with leno attachment; one 65-in. 4x1 box loom, with 624 hook Jacquard; one 36-in. Knowles "Gem" loom; one 36-in. fancy cotton towel loom; one 30-in. Knowles fancy cotton loom, with 16 harness dobby; two 16 harness dobbies.

Universal Winding Co., Boston, Mass.—One 6 spindle cone and tube winder.

Woonsocket Machine and Press Co., Woonsocket, R. I.—Half value on one 96 spindle jack roving frame.

T. C. Entwistle, Lowell, Mass.—Half value on one beaming frame.

Fales & Jenks Machine Co., Pawtucket, R. I.—Two combination warp and filling spinning frames, 80 spindles each; one wet twister, combined filling and taper top wind, 70 spindles; half value on twister like above, all necessary gears, etc.

T. B. Wood's Sons, Chambersburg, Pa.—One-fourth value on equipment of shafting, hangers and pulleys used in new extension of building.

Jones & Laughlin Co., Limited, Pittsburg, Pa.—The entire original equipment of shafting, hangers and pulleys.

Whitin Machine Works, Whitinsville, Mass.—Half value on following: One 40-in. cam loom; one 40-in. loom, with 20 harness dobby; one 30-in. duck loom; two combination warp and filling ring spinning frames, 80 spindles each; all gears, etc.

Schaum & Uhlinger, Philadelphia, Pa.—One top engine drive, self-balancing, hydro-extractor.

The Metallic Drawing Roll Co., Indian Orchard, Mass.—Metallic drawing rolls for railway heads and draw frames as required.

Westinghouse Electric Co., East Pittsburg, Pa.—One 22 K. W., 220 volt direct current motor.

The American Moistening Co., Boston, Mass.—Complete system of "Vortex" humidifiers, including pump, tank and connections.

Beattie Machine Works, Cohoes, N. Y.—One single elastic stitch looper.

E. Jenckes Manufacturing Co., Pawtucket, R. I.—One "Invincible" seamless hosiery knitting machine.

W. W. Altemus & Son, Philadelphia, Pa.—One bobbin winder.

New Bedford Paper Co., New Bedford, Mass.—Cops, cones, tubes, etc., as required.

Charlotte Supply Co., Charlotte, N. C.—All belting as required.

American Supply Co., Providence, R. I.—Heddles, heddle frames, reeds and loom supplies as required.

Loom Picker Co., Biddeford, Me.—Loom supplies.

The Emmons Loom Harness Co.—Cotton harness, reeds and loom supplies.

Roney & Rae Co., Woonsocket, R. I.—Twelve bobbin holders.

Steel Heddle Manufacturing Co., Philadelphia, Pa.—2,500 patented flat steel heddles.

R. A. Blythe, Philadelphia, Pa.—One lot mercerized yarns.

Barber & Coleman, Boston, Mass.—One Barber knotter.

National Ring Traveller Co., Providence, R. I.—One lot of spinning and twister travellers.

DeHaven Manufacturing Co., Brooklyn, N. Y.—One lot of spinning and twister travellers.

Victor Shaw Ring Traveller Co., Providence, R. I.—One lot spinning travellers.

Morley Button Manufacturing Co., Boston, Mass.—One lot spinning travellers.

Sykes & Street, New York, N. Y.—Collection of dye stuffs.

New York and Boston Dyewood Co., New York, N. Y.—Collection of dye stuffs.

Victor G. Bloede & Co., Baltimore, Md.—Collection of dye stuffs and mordants.

Cassella Color Co., New York, N. Y.—Large collection of dye stuffs.

Kuttroff, Pickardt & Co., New York, N. Y.—Collection of dye stuffs.

Farbenfabriken, of Elberfeld Co., New York, N. Y.—Large collection of dye stuffs, over 300 samples.

H. A. Metz & Co., New York, N. Y.—Large collection of dye stuffs.

Grasselli Chemical Co., New York, N. Y.—Chemicals used in dyeing.

Schoellkopf, Hartford & Hanna & Co., Buffalo, N. Y.—Large collection of dye stuffs.

Roessler & Hasslacher Chemical Co., New York, N. Y.—Sodium peroxide for bleaching demonstrations.

Berlin Aniline Works, New York, N. Y.—Collection of dye stuffs.

Chas. J. Fox, Philadelphia, Pa.—50 lbs. textile soaps.

Kalle & Co., New York, N. Y.—Collection of dye stuffs.

A. Klipstein & Co., New York, N. Y.—Collection of dye stuffs.

Woonsocket Reed and Shuttle Works, four self-threading shuttles.

Southern Railway Co.—Half freight rates, over their lines, on entire original equipment of machinery.

Donations to the Library

Since the publication of the last catalogue, the library has received gifts from the following:

Supt. of Education—The Jews of South Carolina, Barnett A. Elzas.

Ex. Committee—The 250th Anniversary of Settlement of Jews in the U. S.

———— Southern Gardener's Practical Manual, J. S. Newman.

Mrs. Wm. Henry Trescot—History of South Carolina College, M. La Borde.

Dr. P. H. E. Sloan—The Packer, The Private Car Lines and the People, J. Ogden Armour.

Mrs. P. H. Mell—Belshazzar (A Tale of Babylon), Wm. Stearns Davis.

W. H. Wylie—Treatise on the Vine, W. R. Prince.

B. C. Hard—A Maid of the Foot-Hills, James W. Daniels.

W. E. Gonzales—History of Old Cheraws, Alexander Gregg.

W. E. Gonzales—School History of South Carolina, John J. Dargan.

Cadet G. F. Garlington—Men of the Times, South Carolina Leaders, J. C. Garlington.

Prof. C. S. Doggett—24 volumes in science.

PAMPHLETS.

Hon. Andrew Carnegie—James Wilson, Patriot, and the Wilson Doctrine.

A. S. Salley, Jr.—Report of Historical Commission of South Carolina.

A. S. Salley, Jr.—Contents of South Carolina Gazette, January, 1732.

A. S. Salley, Jr.—Sketch of William Rivers.

A. S. Salley, Jr.—Sketch of the Calhoun Family.

PAPERS.

The Prairie Farmer, The Practical Farmer, The Progressive Farmer, The Southern Farmer, Southern Farm Gazette, National Farmer and Stock Grower, American Agriculturist, Four Trade News, The Greenville Daily News, The Anderson Daily Mail, The Spartanburg, Herald, Herald and News, The Patriot, The Manning Times, The Athens Banner, The Abbeville Press and Banner, The Clinton Chronicle, Our Monthly, The Baptist Courier, The Baptist Press, Wool and Cotton Reporter.

NOTE.—A special book is kept in which the record of every donation is preserved, and a special label, stating the name of the donor, is placed in each volume presented.

Donations to the Museum

The Museum during the past year has received the following:

A silver sewing bird formerly owned by Mrs. John C. Calhoun and afterwards by her daughter, Mrs. Clemson, has been contributed by Mr. J. C. Stribling, of Pendleton, S. C.

The pen used by the original seven Life Trustees in accepting the Clemson bequest has also been presented by Mr. J. C. Stribling.

From H. C. Markley, Greenville, S. C., a flint-lock musket, an old iron cotton tester, one pike.

From Dr. P. H. Mell, one of the first cameras manufactured in this country, specimens of old Egyptian cloth.

From H. H. Smith, of the New York World, bark of the

lace paper tree from the Barbadoes, cocoa pod from Trinidad, melted links of iron chain from St. Pierre, Trinidad nutmegs.

From Prof. T. W. Keitt, copper ore from North Carolina, rattlesnake skin from North Carolina.

From the State Geologist, collection of minerals and rocks from South Carolina.

From Oren B. Brodie, minerals and specimens of Indian arrow-heads and pottery.

From Miss Trescott, a set of custard cups.

From F. H. H. Calhoun, minerals and rocks from Colorado, Utah, New Mexico, Arizona, Montana and Illinois.

Donations to the Textile Museum

One reel, made by John Verner, a Revolutionary soldier; loaned by Miss Mary R. Shelor, Westminster, S. C.

One hand loom, loaned by Dr. W. B. Noffz, Cross Hill, S. C.

Samples ticking, from the Lexington Mfg. Co., Lexington, S. C.

One copy of "The Cotton Gin. The History of Its Invention," by D. A. Tompkins. Presented by the author.

700 mounted cloth samples, from Marshall Field & Co., Chicago, Ill. Complete set of samples of cloth in demand in the Chinese market, showing defects of American goods, from U. S. Department of Commerce and Labor.

Experiment Station and Inspection Work

Clemson College is not only engaged in providing courses of instruction for the youths of the State, but under the laws of South Carolina it is conducting work of great importance to the farmers, fruit growers, and people engaged in animal industry. There are four departments of experimentation and inspection inaugurated by the Board of Trustees:

1. Experiments in Agriculture (State Experiment Station).
2. Inspection of Fertilizers.
3. Veterinary Inspection.
4. Entomological Inspection.

The Experimental Station is devoted to experiments in subjects relating to the chemical composition of plants and soils; rotation experiments; plant breeding; study of forage plants for hay and pasturage; plant diseases; diseases of animals, such as tuberculosis, Texas fever, glanders; feeding of pigs; general dairy experiments; insects injurious and beneficial to plants; studies of varieties of fruits; methods of pruning grape vines, etc.

Bulletins giving the results of these experiments are published at intervals during the year, and are mailed free to every one who applies for them.

Although the Station was established for the benefit of the farmers, students of the College profit by the experiments, in connection with the regular courses of study.

The second division, viz: the inspection of fertilizers, is conducted by the Board of Trustees for the protection of the farmers in the State against the introduction of fraudulent brands of fertilizers. The inspectors are appointed by the Board of Trustees, and the entire work of issuing tags, the analysis of samples and the enforcement of the law, is in the hands of the Board of Trustees of Clemson College. After paying the expenses required for conducting this inspection, all the surplus money is turned over to the College for running expenses and equipment.

On the 19th of February, 1901, the General Assembly passed an Act empowering the Board of Trustees of Clemson College to promulgate and enforce rules and regulations for the guidance of the Veterinarian of the College for the treatment or destruction of animals affected with contagious diseases, and to prescribe the powers of the Veterinarian whenever such diseases appear in any part of the State. Under this law the Veterinarian, upon receipt of a notice from two citizens, is authorized to investigate outbreaks of infectious or contagious diseases among domestic animals and to apply such measures as are necessary to protect the public from injury from the same.

The Entomologist is required by the State law to inspect all nursery stock coming into the State and to prevent the ravages of insects as far as possible.

On the 19th of February, 1901, the General Assembly passed an Act requiring the Board of Trustees of Clemson College to designate three of their number, to be known as the State Board of Entomology. To the said Board was given all power to adopt rules and regulations

governing the inspection relative to the sale and transportation of trees, plants, shrubs, cuttings, buds, vines, bulbs, or roots that they may deem advisable in order to prevent or remove or destroy any insect pests or plant diseases in the State. The Board was also given power to appoint an Entomologist, who should be a skilled Horticulturist, and Assistant Entomologist, if, in their judgment, it would be impossible for the Entomologist to discharge the duties hereby devolved upon him. Such an Entomologist was also given the powers of an inspector, with authority to visit in sections of the State where insects injurious to plants are believed to exist, and to determine whether such plants should or should not be destroyed.

Popular Science Bulletins

In addition to the Experiment Station bulletins setting forth the results of experiments and other investigations in the interest of agricultural industries, the College has inaugurated a series of bulletins on a variety of scientific subjects of interest to the people at large, and written, as far as practicable, in non-technical language. A number of these are now in preparation, including the subjects of road construction and maintenance, protection against lightning, etc. They will be mailed, like the Experiment Station bulletins, free of charge to those who apply for them.

Analyses, Information, Etc.

The various departments of the College and Experiment Station will furnish, free of charge, advice and information on any topic pertaining to general agriculture, horticulture, botany, entomology, veterinary science, dairying, stock breeding, etc.; also, analyses of fertilizers, marls, waters and other substances, assays of ores, determination of rocks and minerals, tests of bricks, cements, building stones, illuminating oils, calibration of electrical instruments, etc.

The departments cannot undertake to analyze stomachs or other parts of poisoned animals, or to make tests for poisons.

All inquiries and requests should be addressed to the President, giving explicit account of conditions, difficulties, etc., as far as possible, and the matter will be referred promptly to the proper department for further correspondence.

Before sending samples of any kind for examination or analysis, it is best to write for instructions, and thus avoid trouble and delay.

Analyses for State Geologist

In addition to the work referred to above, analyses are made for the State Geologist of the various materials collected by him. These analyses are made as provided for in paragraph 14, section 1, Act of the General Assembly No. 605, approved February 22, 1902.

Farmers' Institutes

During the year farmers' institutes are held, under the management of the College, in many counties of the State. The President and pro-

fessors of agriculture, chemistry, horticulture, dairying, veterinary science, botany, and other members of the Faculty, take part in these institutes. The effort is made to bring practical information to the farmer, and to give him the results of scientific investigation in the interest of agriculture. The success thus far attained is most encouraging, and these institutions have become a permanent feature in the work of the College.

Farmers wishing an institute held in their county or community should write to the President.

During the fall and winter months, the College had the use of a vestibule car loaned it by the Southern Railway. This car was transported free of cost to thirty-two different towns along the Southern and Atlantic Coast Line railways. A number of lectures from the College, and experts in various lines from outside the State, accompanied the car to give lectures on subjects relating to agriculture.

This car was used as an exhibit car, illustrating the work done at Clemson by students in the various departments. It contained dairy apparatus, material to show best the methods of pruning grapes, fruit trees, methods of building, etc. Forty-five varieties of cowpeas, twenty varieties of corn, thirty varieties of wheat, samples of fertilizer constituents, geological specimens of valuable minerals found in the State, were also to be seen in this car. The car was also fitted with a magic lantern to give illustrated lectures on various subjects.

Thomas G. Clemson's Will

The following paragraphs are extracts from Mr. Clemson's will relating to the establishment of the College:

Whereas, I, Thomas G. Clemson, of the County and State aforesaid, did, on the 14th of August, 1883, execute my last will and testament, wherein I sought to provide for the establishment of a scientific institution upon the Fort Hill place, and therein provided what sciences should be taught in said institution; and, whereas, I am now satisfied that my intention and purpose therein may be misunderstood as intending that no other studies or sciences should be taught in said institution than those mentioned in said will, which was not my purpose or intention: Now, desiring to make my purpose plain, as well as to make some other changes in the disposition of my property than made in said will, I do now make, publish and declare this instrument as and for my last will and testament, hereby revoking all previous wills and codicils by me made, especially the will above referred to, dated August 14th, 1883. Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable,

physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, to fix the course of studies, to make rules for the government of the same, and to change them, as in their judgment experience may prove necessary; but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agricultural and mechanical industries. I trust I do not exaggerate the importance of such an institution for developing the material resources of the State, by affording its youth the advantage of scientific culture, and that I do not over-rate the intelligence of the Legislature of South Carolina, ever distinguished for liberality, in assuming that such appropriations will be made as will be necessary to supplement the fund resulting from the bequest herein made.

ITEM 1.—I therefore give and devise to my executor, hereinafter named, the aforesaid Fort Hill place, where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed (of which the Chief Justice of South Carolina shall be the Judge), then my executor shall execute a deed of the said property to the said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation: *Provided, however,* That this acceptance by the State shall be signified, and a practical carrying out be commenced, within three years from the date of the probate of this my will. During this term of three years, or as much thereof as may elapse before the acceptance or refusal of this donation, my executor shall invest the net produce of the land and other property, such invested fund awaiting the action of the Legislature, and to form a part of the endowment of said institution, if accepted, or to form a part of the endowment of the college or school hereinafter provided for, should the donation not be accepted by the State.

ITEM 2.—The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit: R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker, and J. E. Bradley; and the State, if it accepts the donation, shall never increase the Board of Trustees to a number greater than thirteen in all, nor shall the duties of said Board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment

or election of the other six Trustees, if it accepts the donation. And I do hereby request the seven Trustees above named, or such of them as may be living, or may be willing to act, to meet as soon after my death as practicable, and organize and at once fill all vacancies that may have occurred, and exert themselves to effectuate my purposes as herein set forth. And I hereby instruct my executor to notify them of their appointment herein, as soon as practicable. The name of this institution is to be "The Clemson Agricultural College of South Carolina."

ITEM 4.—It is my desire that the dwelling house on Fort Hill shall never be torn down or altered, but shall be kept in repair, with all the articles of furniture and vertu, which I hereinafter give for that purpose, and shall always be open for the inspection of visitors; but a part of the house may be used by such of the Professors as the Trustees may direct.

Laws of Congress Relating to the College

AN ACT donating public lands to the several States and Territories which may provide Colleges for the benefit of agriculture and the mechanic arts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be granted to the several States, for the purpose hereinafter mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: *Provided,* That no mineral lands shall be selected or purchased under the provisions of this Act.

SEC. 2. *And be it further enacted,* That the lands aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections not less than one-quarter of section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public land subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this Act, land script to the amount of acres for the deficiency of its distributive share; and script to be sold by said State, and the proceeds thereof applied to the uses and purposes prescribed in this Act, and for no other use or purpose whatever: *Provided,* That in no case shall any State to which land script may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land script upon any of the unappropriated lands of the United States subject to sale at private entry, at one dollar and twenty-five cents or less per acre; *and provided further,* That not more than one million acres shall be located by such assignees in any one of the States; *and provided further,* That no

such location shall be made before one year from the passage of this Act.

SEC. 3. *And be it further enacted*, That all the expenses of management, superintendence and taxes, from date of selection of said lands previous to their sales, and all expenses incurred in the management and disbursement of the money which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

SEC. 4. *And be it further enacted*, That all moneys derived from the sale of the lands aforesaid by the State to which the lands are apportioned, and from the sale of land script hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or of some other safe stocks yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in fifth Section of this Act), and the interest of which shall be inviolably appropriated by each State, which may take and claim the benefit of this Act to the endowment, support and maintenance of at least one College, where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, and in such manner as the Legislature of the States may prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. *And be it further enacted*, That the grant of land and land script hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts.

1. If any portion of the fund invested as provided by the foregoing section, or any portion of the interest thereon, shall by any act or contingency be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth Section of this Act, except that a sum not exceeding ten per centum upon the amount received by any State under the provision of this Act may be expended for the purchase of lands for sites of experiment farms whenever authorized by the respective Legislatures of said States.

2. No portion of said fund, nor interest thereon, shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

3. Any State which may take and claim the benefit of the provisions of this Act, shall provide within five years at least not less than one College, as described in the fourth Section of this Act, or the grant to said State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and the title to purchasers under the State shall be valid.

4. An annual report shall be made regarding the progress of each College, recording any improvements and experiments made, with their costs and results, and such other matters, including State and industrial statistics, as may be supposed useful; one copy of which shall be transmitted by mail free by each to all the other Colleges which may be endowed under the provisions of this Act, and also one copy to the Secretary of the Interior.

5. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the State at the maximum price, and the number of acres proportionately diminished.

6. No State, while in a condition of rebellion or insurrection against the government of the United States, shall be entitled to the benefit of this Act.

7. No State shall be entitled to the benefit of this Act unless it shall express the acceptance thereof by the Legislature within two years of the date of its approval by the President.

SEC. 6. *And be it further enacted*, That land script issued under the provisions of this Act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

SEC. 7. *And be it further enacted*, That the land officers shall receive the same fees for locating land script issued under the provisions of this Act as are now allowed for the location of military bounty land warrants under existing laws: *Provided*, That maximum compensation shall not be thereby increased.

SEC. 8. *And be it further enacted*, That the Governors of the several States to which script land shall be issued under this Act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved July 2, 1862.

Agricultural Appropriation Act, passed Senate, February 21, 1907; passed House, March 2, 1907. Approved by the President, March 4, 1907.

That there shall be, and hereby is, annually appropriated out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of agricultural colleges now established, or which may hereafter be established, in accordance with the Act of Congress, approved July 2, 1862, and the Act of Congress, approved August 30, 1890, the sum of \$5,000, in addition to the sums named in said Act, for the fiscal year, ending June 30, 1908, and an annual increase of the amount of such appropriation thereafter for four years by an additional sum of \$5,000 over the preceding year, and the annual sum to be paid thereafter to each State and Territory shall be \$50,000, to be applied only for the purpose of the agricultural colleges as defined and limited in the Act of Congress, approved July 2, 1862, and the Act of Congress approved August 30, 1890.

That the sum hereby appropriated to the States and Territories for the further endowment and support of the colleges shall be paid by,

to, and in the manner prescribed by the Act of Congress, approved August 30, 1890, entitled, "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of the Act of Congress, approved July 2, 1862," and the expenditure of the said money shall be governed in all respects by the provisions of the said Act of Congress, approved July 2, 1862, and the said Act of Congress, approved August 30, 1890: *Provided*, That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts.

AN ACT to establish Agricultural Experiment Stations in connection with the college established in the several States under the provisions of an Act approved July 2, 1862, and of the Acts supplementary thereto.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of College or Colleges, or Agricultural Department of Colleges in each State or Territory established, or which may hereafter be established, in accordance with the provisions of an Act approved July 2, 1862, entitled "An Act donating public lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts," or any of the supplements to said Act, a department known and designated as an "Agricultural Experiment Station:" *Provided*, That any State or Territory in which two such Colleges have been or may be so established, the appropriation hereinafter made to such State or Territory shall be equally divided between such Colleges, unless the Legislature of such State or Territory shall otherwise direct.

SEC. 2. That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the disease to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying condition and needs of the respective States and Territories.

SEC. 2. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate, from time to time, such lines of inquiry as to him shall seem most important; and, in general, to furnish such advice and assistance as will promote the purposes of this Act. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

SEC. 4. That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the States or Territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the Postmaster General may from time to time prescribe.

SEC. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments and printing and distributing the results as hereinbefore prescribed, the sum of \$15,000 per annum is hereby appropriated to each State, to be especially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of Section eight of this Act, out of any money in the treasury proceeding from the sales of public lands, to be paid in equal quarterly payments, on the first day of January, April, July and October in each year, to the Treasurer or other officer duly appointed by the governing boards of said Colleges to receive the same, the first payment to be made on the first day of October, 1887: *Provided, however,* That out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement, or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five per centum of such annual appropriation may be so expended.

SEC. 6. That whenever it shall appear to the Secretary of the Treasury from the annual statement of receipts and expenditures of any of said stations that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the succeeding annual appropriation to each station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this Act shall be construed to impair or modify the legal relation existing between any of the said Colleges and the government of the States or Territories in which they are respectively located.

SEC. 8. That in States having Colleges entitled under this Section to the benefits of this Act and having also Agricultural Experiment Stations established by law separate from said Colleges, such States shall be authorized to apply such benefits to experiments at stations so established by such States; and in case any State shall have established under the provisions of said Act July 2d aforesaid, an Agricultural Department or Experiment Station, in connection with any University, College, or institution not distinctively an Agricultural College, or School, and such States shall have established or shall hereafter establish a separate Agricultural College or School, which shall have connected therewith an Experimental Farm or Station, the Legislature of such State may apply in whole or in part the appropriation made by this Act, to separate Agricultural College or School, and no Legislature shall by contract expressed or implied disable itself from so doing.

SEC. 9. That the grant of moneys authorized by this Act are made subject to the legislative assent of the several States and Territories to the purposes of said grants: *Provided*, That payment of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified to by the Secretary of the Treasury.

SEC. 10. Nothing in this Act shall be held or construed as binding the United States to continue any payments from the Treasury to any or all the States or institutions mentioned in this Act, but Congress may at any time amend, suspend or repeal any or all the provisions of this Act.

Approved March 2, 1887.

AN ACT TO PROVIDE FOR AN INCREASED ANNUAL APPROPRIATION FOR AGRICULTURAL EXPERIMENT STATIONS AND REGULATE THE EXPENDITURE THEREOF.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That there shall be, and hereby is, annually appropriated, out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of agricultural experiment stations now established, or which may be hereafter established, in accordance with the Act of Congress, approved March second, eighteen hundred and eighty-seven, the sum of five thousand dollars for the year ending June thirtieth, nineteen hundred and six, and an annual increase of the amount of such appropriation thereafter for five years by an additional sum of two thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be fifteen thousand dollars, to be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective States or Territories.

SEC. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of agricultural experiment stations shall be annually paid, in equal quarterly payments, on the first day of January, April, July and October of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of Agriculture, out of the Treasury of the United States, to the Treasurer or other officer duly appointed by the governing boards of said experiment stations to receive the same, and such officers shall be required to report to the Secretary of Agriculture, on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement, on schedules prescribed by the Secretary of Agriculture. The grants of money authorized by this Act are made subject to legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified by the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of any State or Territory for the further and more complete endowment, support and maintenance of agricultural experiment stations as provided in this Act shall by any action or contingency be diminished or lost, or be misapplied, it shall be replaced by said State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys, exceeding five per centum of each annual appropriation, shall be applied directly or indirectly under any pretense whatever to the purchase, erection, preservation or repair of any building or buildings, or to the purchase or rental of land. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located, a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the Secretary of Agriculture and to the Secretary of the Treasury of the United States.

SEC. 4. That on or before the first day of July in each year after the passage of this Act the Secretary of Agriculture shall ascertain and certify to the Secretary of the Treasury as to each State and Territory, whether it is complying with the provisions of this Act and is entitled to receive its share of the annual appropriation for agricultural experiment stations under this Act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of Agriculture shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of Agriculture. If the next Congress shall not direct such sum to be paid, it shall be covered

into the Treasury; and the Secretary of Agriculture is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of Agriculture shall make an annual report to Congress on the receipts and expenditures and work of the agricultural experiment stations in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. That Congress may at any time amend, suspend, or repeal any or all of the provisions of this Act.

Approved March 16th, 1906.

AN ACT to supply a portion of the public lands to the more complete endowment and support of Colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress, approved July second, eighteen hundred and sixty-two.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated out of any money in the Treasury not otherwise appropriated, arising from the sales of public lands, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an Act of Congress, approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of one thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction: *Provided*, That no money shall be paid out under this Act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this Act if the funds received in such State or Territory be equitably divided as hereinafter set forth: *Provided*, That in any State in which there has been one college established in pursuance of the Act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the Act to which this Act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the funds to be received under this Act between one college for white*

students and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this Act and subject to its provisions, as much as it would have been if it had been included under the Act of eighteen hundred and sixty-two, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provisions in reference to separate colleges for white and colored students.

SEC. 2. That the sum hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury upon the warrant of the Secretary of the Interior, out of the Treasury of the United States, to the State or Territorial Treasurer or to such officer as shall be designated by the laws of such State or Territory to receive same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the Treasurers of the respective colleges or other institutions entitled to receive the same, and such Treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this Act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support and maintenance of colleges, or of institutions for colored students, as provided in this Act, shall, by any action or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings. An annual report by the President of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any Experimental Stations attached to said colleges, with their costs and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail to all other colleges further endowed under this Act.

SEC. 4. That on or before the first day of July in each year, after the passage of this Act, the Secretary of the Interior shall ascertain

and certify to the Secretary of the Treasury as to each State and Territory, whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this Act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid it shall be covered into the treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. Congress may at any time amend, suspend or repeal any or all of the provisions of this Act.

Approved August 30, 1890.

State Laws Relating to the College

In November, 1889, the General Assembly passed the following law, authorizing the establishment of the Clemson Agricultural College of South Carolina:

SECTION 1300. The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament, which was duly admitted to probate on the twentieth day of April, 1888, in the office of the Judge of Probate of the County of Oconee, in the State of South Carolina, wherein he devised and bequeathed to his executor, Richard W. Simpson, of Pendleton, South Carolina, a tract of land situated on Seneca River, in Oconee County, in said State, containing eight hundred and fourteen acres, more or less, known as the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson, subject to the terms and conditions set forth in his last will and testament, and the Treasurer of the State is hereby authorized and empowered to receive and securely hold the said property, both real and personal, and to execute all necessary papers and receipts therefor as soon as the said executor shall convey and transfer the said devise and bequest to the State.

SEC. 1301. The deed and transfer of said property to the State having been duly executed and made by the said executor, in accordance with the provisions of said will, an Agricultural and Mechanical Col-

lege in connection with the aforesaid devise and bequest, to be styled "The Clemson Agricultural College of South Carolina," and situated at Fort Hill, in Oconee County, on the plantation so devised; in which College shall be taught all branches of study pertaining to practical and scientific agricultural and other industries connected therewith, and such other studies as are not inconsistent with the terms of the said will.

SEC. 1302. The said College shall be under the management and control of a Board of thirteen Trustees composed of the seven members nominated by said will and their successors, and six members to be elected by the Legislature in Joint Assembly.

SEC. 1308. One-half of the Land Scrip Fund heretofore vested by Section 1045 of the General Statutes (1882) in the Board of Trustees of the University of South Carolina is hereby vested in the six members of the Board of Trustees of the Clemson Agricultural College elected by the General Assembly; and the State Treasurer is authorized and required to issue a certificate of State stock in the sum of ninety-five thousand nine hundred dollars, bearing interest at the rate of six per centum per annum, payable semi-annually, to the said six members of the said Board of Trustees, to be held as a perpetual fund, the capital of which shall forever remain undiminished, the income of said fund to be used by said Board of Trustees for the building and maintenance of the said Clemson Agricultural College, in accordance with the purposes for which the said Land Scrip was donated by the Act of Congress in relation thereto.

SEC. 1309. The annual grant of fifteen thousand dollars, commonly known as the Hatch Bill fund, made to the State of South Carolina by the Congress entitled "An Act to establish agricultural experiment stations in connection with the colleges established in the several States under the provisions of an Act approved July second, eighteen hundred and sixty-two, and of the Act supplementary thereto," approved March 2d, 1887, shall be and hereby is, withdrawn from the control of the Board of Trustees of the University of South Carolina, in whom it was vested by an Act entitled "An Act to amend Chapter XX., of the General Statutes, entitled 'Of the University of South Carolina,'" approved December 22, 1887; and the said grant of fifteen thousand dollars is hereby vested in the six members of the Board of Trustees of the Clemson Agricultural College of South Carolina chosen by the General Assembly; and an agricultural experiment station shall be established in connection with the said Clemson Agricultural College, and under the direction of the Board of Trustees thereof, to be supported by said grant according to the provisions of the Act of Congress hereinbefore mentioned.

SEC. 1310. The Department of Agriculture of this State, as heretofore constituted and provided for by law, is abolished, and also the office of Commissioner of Agriculture for this State.

SEC. 1311. All the powers, duties, rights and privileges heretofore vested in and exercised by the Commissioner of Agriculture and the Department of Agriculture of this State are hereby vested in and devolved upon the Board of Trustees of the Clemson Agricultural College of South Carolina, except that said Board shall not have any rights, powers or privileges in reference to or in connection with the

management and control of the rights and interests of the State in the phosphate rock or phosphatic deposits in the navigable streams and marshes thereof.

SEC. 1319. All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer of the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South Carolina; and so much of the money so received as shall be necessary to defray the expenses of the Board in performing the duties now by this Chapter devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance.

SEC. 1320. A municipal corporation is hereby created, known as Clemson College, the limits of which shall consist of all the lands belonging to the said College and cover all the territory included in a circle formed with the College building as a center, with a radius of five miles, thus making the diameter of the circle ten miles, within which boundaries the jurisdiction of the corporation shall extend. No dispensary shall ever be located at Calhoun.

The General Assembly also passed the following law in reference to the appropriation made by Congress under the provisions of the Act approved August 30th, 1890:

SEC. 1299. All sums which shall be received by the State from the United States Government, under the provisions of the Act of Congress approved August 30th, 1890, entitled "An Act to apply a portion of the public lands to the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts established under the provisions of an Act of Congress approved July 2d, 1862," shall be equally divided between the Colored Normal and Industrial College and Clemson Agricultural College to the purposes specified in said Act.

Law Relating to the State Geologist

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina*, That a section be added to Article VI., under title "The State Geologist," Civil Code of South Carolina, Vol. I., after Section 740, to be known as Section 740a. That the State Geologist furnish to Clemson Agricultural and Mechanical College as many duplicate specimens of minerals collected by him as may be practicable: *Provided*, Said College shall pay transportation charges.

Approved the second day of March, A. D. 1903.

AN ACT to provide for Beneficial Scholarships in the Clemson Agricultural College of South Carolina.

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina*, That there are hereby established and created one hundred and twenty-four (124) beneficiary scholarships in the Clemson Agricultural College of South Carolina, and each of said scholarships shall be of the value of one hundred dollars per annum, and shall be apportioned and distributed among the several Counties of the State in the same manner as the Members of the House of Representatives are apportioned, so that each County shall have as

many scholarships as such County is entitled to Members in the House of Representatives.

SEC. 2. That said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several Counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said College for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent., upon such examination; and preference shall be given to those young men who desire to take the agricultural course.

SEC. 3. The questions for such examinations shall be prepared by the President or some member or members of the Faculty of the said Clemson Agricultural College, under the direction of the President, and shall be forwarded to the respective County Boards of Education on or before the 15th day of July in each year, together with a statement showing the number of vacant scholarships to which each County is entitled; and the said County Boards of Education shall hold the said examinations and thereafter read and grade the examination papers of all applicants and forward the same to the State Board of Education with their recommendations as to the award of the scholarships.

SEC. 4. That before applying for the said scholarships, applicants shall make proof under oath to their respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said Board permission to stand such examination.

SEC. 5. That scholarships shall be paid from the regular income of said Clemson Agricultural College as now provided by law, and shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and the said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses.

SEC. 6. That this Act shall go into effect from and after the first day of July, A. D. 1904.

Approved the 25th day of February, A. D. 1904.

AN ACT to set apart and establish Christmas holidays for the State institutions of higher learning in the State of South Carolina.

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina,* That all the State Colleges shall suspend exercises for a period of not exceeding ten days, including the time required for going from and returning to said Colleges, said period to include Christmas day and New Year's day.

Approved the 17th day of February, A. D. 1906.

Alumni Organizations

Clemson College Alumni Association

D. H. HENRY, '98, President.
B. R. TURNIPSEED, '96, First Vice-President.
W. G. ADAMS, '00, Second Vice-President.
V. B. HALL, '04, Third Vice-President.
A. B. BRYAN, '98, Secretary.
W. W. KLUGH, '96, Treasurer.
B. H. RAWL, '00, Alumni Orator of 1907; E. B. BOYKIN, '02, Alternate.

The Clemson Club of New York City

R. G. FORSYTHE, '01, President.
D. A. J. SULLIVAN, '02, Vice-President.
J. B. MOSELEY, Secretary and Treasurer.

Pittsburg Chapter of the Clemson Alumni Association

A. E. HOLMAN, '04, President.
V. C. PLATT, '04, Vice-President.
R. P. EVANS, '05, Secretary and Treasurer.

Washington Chapter of the Clemson Alumni

M. E. ZEIGLER, '02, President.
J. E. HARRALL, '05, Vice-President.
G. F. KLUGH, '01, Secretary.
L. E. BOYKIN, '05, Treasurer.
Honorary Members—SENATOR B. R. TILLMAN, HON. A. F. LEVER.

Schenectady Chapter of the Clemson Alumni Association

P. G. LANGLEY, '96, President.
T. S. GANDY, '03, Vice-President.
V. BAKER, '04, Secretary-Treasurer.

Greenville Chapter Clemson Alumni Association

L. O. MAULDIN, '00, President.
L. P. SLATTERY, '05, Secretary and Treasurer.

Graduates 1896-1906

Below are given the occupations and addresses of the alumni, so far as ascertainable at the College, although in several instances as indicated these are not positively known. This preliminary and imperfect list is published here, however, in the hope that it may serve as an aid in the preparation of a complete record of all alumni from the time of graduation, which it is the purpose of the College to compile and publish from time to time in pamphlet form. Graduates, former students, and friends of the institution are requested to co-operate in making this record as nearly complete as possible and in the effort to keep it constantly up to date. The graduates themselves are specially urged to send notice promptly of all changes of occupation or address, promotions, honors, etc.

Information for this record should be addressed to Prof. A. G. Shanklin, Registrar, Clemson College, S. C.

[Note.- Courses pursued are indicated by initials in parentheses: A, agricultural; C, civil engineering; M, mechanical-electrical; T, textile. The numbers accompanying these show years of graduation.]

ADAMS, D. G. (C '06), Asst. Engineer Virginia Passenger & Power Co., Richmond, Va.

ADAMS, P. H. (M '06), Draftsman, General Electric Co., Schenectady, N. Y.

ADAMS, W. G. (C '00), Erecting Engineer, Roanoke Bridge Co., Roanoke, Va.

ALFORD, N. H. (T '03), Asst. Supt. Merrimac Mfg. Co., Huntsville, Ala.

ALFORD, E. P. (C '06), Draftsman, Fort Pitt Bridge Co., Cannonsburg, Penn.

ALL, J. E. (A '00), Bookkeeper, 421 Abercorn St., Savannah, Ga.

- ALL, P. H. (M '01), Bookkeeper, 224 Barnard St. Savannah, Ga.
- ANDERSON, J. W. (T '01), Richburg, S. C., R. F. D. No. 1.
- AULD, F. (M '06), Engineering Apprentice, Westinghouse Elect. & Mfg. Co., Wilkinsburg Station, Pittsburg, Penn.
- AULL, B. M. (M '96), Supt. Pendleton Mfg. Co., Pendleton, S. C.
- AYER, L. W. (A '00), Tobacco Investigation Expert, Bureau of Soils, U. S. Dept. of Agriculture, Marion, Ala.
- BAKER, V. (M '04), General Electric Co., Schenectady, N. Y.
- BALLENGER, C. P. (C '05), Civil Engineer, at present with Southern Railway, Charlotte, N. C.
- BAMBERG, G. E. (M. '02), Jeweler, Bamberg, S. C.
- BARKSDALE, G. R. (M '06), Greenwood, S. C.
- BARNWELL, W. H. (M '03), Inspector Southeastern Tariff Association, Birmingham, Ala.
- BARRE, B. H. (M '02), Manager Barre Lumber Co., Lexington, S. C.
- BARRE, H. W. (A '05), student University of Nebraska, Lincoln, Neb.
- BARRETT, A. R. (T. '02) Mail Service, Rock Hill, S. C.
- BARTON, T. F. (M '06), Testing Dept. General Electric Co., Schenectady, N. Y.
- BASKIN, W. S. (M '06), Testing Dept., General Electric Co., Schenectady, N. Y.
- BEATY, J. T. (C '03), Draftsman, Liddell Mfg. Co., Charlotte, N. C.
- BEATY, W. S. (T '05), Orr Cotton Mills, Anderson, S. C.
- BECKETT, W. (M. '06), Draftsman, General Electric Co., Schenectady, N. Y.

- BLACK, W. E. G. (M '03), Consulting Engineer, City Works, Spartanburg, S. C.
- BLAINE, J. M. (A '96), Chemist, Swift & Co. Montgomery, Ala.
- BLEASE, J. W. (M '01), Electrician, in charge of Greenville Office, Piedmont Electric & Construction Co., Anderson, S. C.
- BOESCH, J. C. (M '06), Engineering Apprentice Westinghouse Elect. & Mfg. Co., Wilkinsburg Station, Pittsburgh, Penn.
- BOINEAU, C. E. (T '03) Traveling, Columbia, S. C.
- BOULWARE, G. P. (A '96), Farming, Newberry, S. C.
- BOWEN, J. T. (M '96), Draftsman, Newport News Shipping Co., Newport News, Va.
- BOYKIN, E. B. (A '02), Special Agent, B. P. I., U. S. Dept. of Agriculture, Washington, D. C.
- BOYKIN, L. E. (A '05), Secretary to Senator A. C. Latimer, and law student at Georgetown University, Washington, D. C.
- BRADFORD, J. L. (C '03), Civil Engineer, American Bridge Co., New York, N. Y.
- BRADLEY, J. T. (M '96), Farming, Troy, S. C.
- BREAZEALE, J. F. (A '96), Chemist, Bureau of Soils, U. S. Dept. of Agriculture, Washington, D. C.
- BROCKMAN, E., JR. (A '02), Clerk St. Johns Hotel, Charleston, S. C.
- BRODIE, J. (T '05), Textile Chemist, in charge dye plant, Huntsville, Ala.
- BROWN, E. F. (M '04), Southern Bell Tel. Co., Charleston, W. Va.
- BROWN, J. H. (T '02), Merchant, Mountain Rest, S. C.
- BROWNE, D. O. (A '98), Sec.-Treas. People's Oil & Fertilizer Co., Anderson, S. C.
- BRUNSON, A. L., JR. (C '06), Civil Engineer, Southern Power Co., Charlotte, N. C.

- BRYAN, A. B. (A '98), Asst. Prof. of English, Clemson College, S. C.
- BRYAN, S. G. (A '04), Supt. Alderman Stock Farm, Alcolou, S. C.
- BRYANT, F. L. (M '96), Consulting Engineer, Spartanburg, S. C.
- BULL, I. W. (C '06), at present in charge of mother's farming business, Vance, S. C.
- BURGESS, J. M. (A '02), Asst. in Dairying and Animal Husbandry, Clemson College, S. C.
- BURGESS, W. A. (C '01), Erecting Engineer, Coal River Ry. Co., St. Albans, W. Va.
- BUTLER, A. A. (A '01), Southern Railway Co., Spartanburg, S. C.
- BYARS, A. F. (A '06), Cotton Buyer, Marion, S. C.
- CAIN, W. O. (T '03), Textile Chemist, Overseer in dyeing plant, Richmond, Va.
- CALDWELL, J. C. L. (M '05), Southern Express Co., Columbia, S. C.
- CALHOUN, J. S., JR. (C '99), Supt. of Construction for Moise DeLeon, Contractor, Atlanta, Ga.
- CALHOUN, P. N. (M '96), Auditor Accounting Dept., Swift & Co., Chicago, Ill.
- CAMPBELL, E. G. (M '02), Electrician, General Electric Co., Panama.
- CANNON, H. L. (T '01), Hartsville Cotton Mill, Hartsville, S. C.
- CANNON, R. S. (M '00), Electrical Engineer, Catawba Power Co., Rock Hill, S. C.
- CANTY, H. T. (C '02), Resident Engineer, R. & C. B. Railway Co., Richmond, Va.
- CARPENTER, W. H. (M '96), 2d Lieut. U. S. Army, Instructor in Mathematics, West Point, N. Y.
- CARR, A. B. (M '02), Manager Buckeye Cotton Oil Co., Jackson, Miss.

- *CAUGHMAN, J. E. (M '00), New Mexico Cottage Sanitarium, Silver City, N. M.
- CHAPMAN, W. E. (T '02), Teaching and farming, Denver, S. C.
- CHEATHAM, J. E. (A '01), Conductor Southern Railway, Greenville, S. C.
- CHERRY, D. F. (C '06), Assistant Engineer, Panama Canal Service, Panama.
- CHISOLM, W. B. (M '03), Supt. Fort Meade Mines, V.-C. Chemical Co., Fort Meade, Fla.
- CHREITZBERG, A. M. (M '96), Southern Railway Co., Washington, D. C.
- CHREITZBERG, C. K. (M. '99), Resident Engineer, Roanoke Bridge Co., Rock Hill, S. C.
- CLEVELAND, A. F. (A '06), Manager Dairy Farm, Spartanburg, S. C.
- CLINKSCALES, G. B. (M '02), Instructor in Wofford College, Spartanburg, S. C.
- CLINKSCALES, L. D. (T '01), Travelling, Heinz Pickle Co., Spartanburg, S. C.
- COLE, W. F. (T '02), Medical Student John Hopkins University, Baltimore.
- COLEMAN, W. W. (M '02), Civil Engineer, U. S. Government Service, Philippine Islands.
- CONNOR, J. R. (A '04), Farming, Eutawville, S. C.
- COPE, F. E. (T '05), Supt. Leota Cotton Mill, Graham, N. C.
- COTHRAN, P. C. (C '04), Asst. Engineer, S. & W. Ry., Raleigh, N. C.
- COTHRAN, T. W. (M '96), Civil Engineer, at present with Norfolk & Southern Ry., Raleigh, N. C. Permanent address, Greenwood, S. C.
- COTHRAN, W. B. (T '02), Asst. Engineer, U. S. Revenue Cutter Service.

*Died February 24, 1907.

- CRAWFORD, FRANK (M '02), Inspector, U. S. Navy Yard,
Charleston, S. C.
- CROMER, B. C. (T '02), Teaching, Anderson, S. C.,
Graded Schools.
- CROUCH, H. W., JR. (C '05), Asst. Engineer, S. A. L.
Ry., Waldo, Fla.
- CULLUM, J. C. (T '03), U. S. Revenue Cutter Service,
Asst. Engineer U. S. S. "Onondaga." Address,
Treasury Dept., Washington, D. C.
- CUMMINGS, J. P. (T '03), Draftsman, S. A. L. Ry., Ports-
mouth, Va.
- CUNNINGHAM, F. H. (T '03), Civil Engineer, with De-
Camp & Cunningham, Anderson, S. C.
- CUNNINGHAM, J. F. (T '03), Mill Engineer, with J. E.
Sirrine, Greenville, S. C.
- DARLINGTON, W. R., JR. (T '01), Travelling, Savannah,
Ga.
- DERRICK, O. L. (T '06), Dyer, Victoria Cotton Mills,
Rock Hill, S. C.
- DESAUSSURE, F. G. (M '03), Engineer, with Erie Engine
Works, Meadville, Penn.
- DIBBLE, E. B. (M '05), Engineering Apprentice, West-
inghouse Elect. & Mfg. Co., Wilkesburg Station,
Pittsburg, Penn.
- DICKSON, L. C. (T '06), with W. E. Dickson, Yarn
Broker, Charlotte, N. C.
- DODD, H. B. (C '00), Asst. Engineer, American Bridge
Co., Charleston, S. C.
- DONALDSON, J. R. (T '00), Union Cotton Mills, Lafayette,
Ga.
- DOUTHIT, C. (M '02), Mgr. Augusta & Macon Mills,
Buckeye Cotton Oil Co., Augusta, Ga.
- DOWLING, D. (M '96), District Agt. Toledo Scales Co.,
and Gen. Agt. Hammond Typewriter Co., Columbia,
S. C.

- DUCKWORTH, J. C. (T '01), Mgr. Williamston Oil Mill, Williamston, S. C.
- EARLE, D. E. (T '03), Asst. Professor Carding and Spinning, Clemson College, S. C.
- EARLE, E. P. (M '96), Owner and Supt. Seneca Iron Works, Seneca, S. C.
- EARLE, J. C. (M '02), Bookkeeper, Anderson, S. C.
- ELDER, M. L. (M '99), Designer in Transformer Dept., Gen. Elect. Co., Schenectady, N. Y.
- ELIAS, P. L. (M '04), with Schoenberg & Co., Electrical Contractors, New York City.
- ELLIOTT, T. K. (M '05), New York Telephone Co., 199 DeKalb Ave., Brooklyn.
- ELLIS, E. D. (M '03), Supt. City Power & Light Plant, Plant City, Fla.
- ELLISON, A. G. (A '06), Southern Cotton Oil Co., Gastonia, N. C.
- ELLISON, T. R. (M '06), Engineering Apprentice, Westinghouse Elect. & Mfg. Co., Wilkesburg Station, Pittsburg, Penn.
- EPPS, H. G. (C '00), Farming, Midland City, Ala.
- EPPS, S. W. (A '03), Farming, Kingstree, S. C.
- EVANS, R. P., JR. (M '05), Engineering Division, Westinghouse Elect. & Mfg. Co., Wilkesburg Station, Pittsburg, Penn.
- FAIR, W. N. (T '01), Fertilizer Inspector, Edgefield, S. C.
- FARIS, S. J. (M '04), Catawba Power Co., Rock Hill, S. C.
- FELDER, S. I. (M '04), New York Telephone Co., 199 DeKalb Ave., Brooklyn.
- FINGER, E. R. (C '03), Civil Engineer, Fort Pitt Bridge Works, Cannonsburg, Penn.
- FLETCHER, B. A. (C '00), Merchant, Gibson, N. C.
- FOLK, J. F. (A '96), Cashier Holly Hill Bank, Holly Hill, S. C.
- FORD, S. T. (T '04), Eureka Mills, Chester, S. C.

- FORSYTHE, R. G. (M '01), Draftsman, U. S. Navy Yard, Brooklyn, 199 De Kalb Ave.
- FOX, L. W. (T '03), Overseer Spinning Dept. Shetucket Mfg. Co., Norwich, Conn.
- FREEMAN, B. (A '03), Asst. Chemist, Clemson College, S. C.
- FURMAN, C. M., JR. (A '96), Constructing Engineer, with Lockwood & Green Co., Pee Dee, N. C.
- GANDY, A. A. (T '05), Darlington Cotton Mill, Darlington, S. C.
- GANDY, T. S. (M '03), General Electric Co., Schenectady, N. Y.
- GARDNER, B. H. (M '03), Supt. Motor Dept., Dayton Lighting Co., Dayton, O.
- *GARRIS, J. S. (A '98).
- GARRISON, W. D. (A '03), Foreman Experiment Station Farm, Clemson College, S. C.
- GELZER, JOHN (M '04), Correspondence Division, Westinghouse Elect. & Mfg. Co., Wilksburg Station, Pittsburg, Penn.
- GELZER, J. A. (M '06), Wagner Electric Mfg. Co., St. Louis, Mo.
- GENTRY, C. W. (A '98), Physician, Enoree, S. C.
- GEORGE, W. D. (M '00), Electrician, Arkwright Cotton Mills, Laurens, S. C.
- GETTYS, J. E. (T '02), Overseer Weaving Dept., Victoria Mills, Rock Hill, S. C.
- GIGNILLIAT, C. N. (M '02), Dealer in Cotton, Fertilizers, etc., Seneca, S. C.
- GLENN, J. P. (T '03), Medical Student, Vanderbilt University, Nashville, Tenn.
- GLENN, T. K. (M '01), General Electric Co., Schenectady, N. Y.

*Died November 26, 1903.

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ZEIGLER, M. E. (A '02), Secretary to Congressman A. F. Lever, Washington, D. C.

List of Graduates 1906

NAME	COURSE	COUNTY
D. G. Adams	Civil	Darlington
P. H. Adams	Mech. Elec.	Greenwood
E. P. Alford	Civil	Florence
F. Auld	Mech. Elec.	Greenwood
G. R. Barksdale	Mech. Elec.	Greenwood
T. F. Barton, Jr.	Mech. Elec.	Orangeburg
W. S. Baskin	Mech. Elec.	Abbeville
W. Beckett	Mech. Elec.	Charleston
J. C. Boesch	Mech. Elec.	Charleston
A. L. Brunson, Jr.	Civil	Edgefield
I. W. Bull	Civil	Orangeburg
A. F. Byars	Agri.	Marion
D. F. Cherry	Civil	Charleston
A. F. Cleveland	Agri.	Spartanburg
O. L. Derrick	Text.	Lexington
L. C. Dickson	Text.	Mecklenberg, N. C.
A. G. Ellison	Agri.	Fairfield
T. R. Ellison	Mech. Elec.	Fairfield
J. A. Gelzer	Mech. Elec.	York
T. L. Goodwin	Civil	Anderson
C. A. Grainger	Text.	Horry
S. P. Harper	Mech. Elec.	Williamsburg
D. H. Hill	Agri.	Abbeville
G. B. Holland	Mech. Elec.	Oconee
L. R. Hoyt	Civil	Sumter
T. B. Jacobs	Agri.	Lexington
H. S. Jenkins	Civil	Barnwell
J. E. Johnson	Agri.	Florence
S. L. Johnson	Text.	Charleston
E. H. Jones	Mech. Elec.	Abbeville
T. E. Keitt	Agri.	Oconee
J. Klinck	Text.	Charleston
A. R. McAliley	Mech. Elec.	Chester

NAME	COURSE	COUNTY
J. H. McClain	Agri.	Spartanburg
F. B. McLaurin	Text.	Marlboro
L. B. Martin	Agri.	Oconee
W. C. Moore	Agri.	Lee
J. M. Moss, Jr.	Agri.	Orangeburg
W. H. Newell	Civil	Anderson
J. V. Phillips	Civil	Cherokee
W. A. Putnam, Jr.	Mech. Elec.	Laurens
J. J. Rauch	Text.	Saluda
J. H. Reid	Civil	Anderson
K. O. Rinehart	Mech. Elec.	Saluda
W. A. Sanders	Civil	Anderson
M. A. Savage	Mech. Elec.	Colleton
H. W. Schumpert	Mech. Elec.	Newberry
W. R. Smith	Mech. Elec.	Charleston
L. G. Southard	Agri.	Union
T. E. Stokes	Agri.	Darlington
H. P. Stuckey	Agri.	Darlington
J. C. Summers	Agri.	Orangeburg
F. R. Sweeny	Civil	Spartanburg
S. L. Webb	Civil	Charleston
W. P. White	Mech. Elec.	Beaufort
R. Y. Winters	Agri.	Darlington
J. L. Woodroof	Civil	Chatham, Ga.
J. N. Wright	Mech. Elec.	Laurens

Students 1906-1907

Senior Class

NAME	COURSE	COUNTY
W. B. Aull	Agri.	Anderson
J. B. Bailey	Mech. Elec.	Greenwood
M. H. Banks	Mech. Elec.	Orangeburg
J. H. Barksdale	Mech. Elec.	Greenwood
A. V. Bethea	Agri.	Marion
O. H. Bissell	Civil	Charleston
T. L. Bissell	Mech. Elec.	Charleston
L. R. Boggs	Mech. Elec.	Pickens
S. I. Bond	Agri.	Beaufort
T. N. Bristow	Mech. Elec.	Marlboro
A. K. Britt	Civil	Abbeville
J. J. Brown	Agri.	Spartanburg
A. L. Campbell	Civil	Hampton
B. D. Carter	Agri.	Colleton
J. C. Clark	Agri.	Marion
F. A. Connor	Mech. Elec.	Greenwood
E. A. Crawford	Agri.	York
H. C. Crum	Agri.	Richland
G. D. Curtis	Civil	Chatham, Ga.
R. E. Dalton	Civil	Greenville
C. E. Durant	Civil	Colleton
F. M. Dwight	Mech. Elec.	Sumter
T. D. Eason	Agri.	Charleston
R. A. Easterling	Mech. Elec.	Barnwell
A. L. Ervin	Civil	Florence
G. H. Folk	Mech. Elec.	Newberry
F. M. Furtick	Mech. Elec.	Lexington
H. E. Giles	Mech. Elec.	Greenwood
J. R. Godley	Mech. Elec.	Colleton
R. G. Harris	Agri.	Laurens
A. S. Heyward	Mech. Elec.	Chatham, Ga.
J. W. Hicklin	Mech. Elec.	Chester

NAME	COURSE	COUNTY
A. V. Hooks	Civil	Horry
L. S. Horton	Mech. Elec.	Anderson
P. LaV. Howle	Agri.	Darlington
J. S. Hughes	Agri.	Edgefield
G. R. Jones	Mech. Elec.	Sumter
E. M. Kaminer	Agri.	Richland
J. W. Keel	Agri.	Barnwell
A. M. Klugh	Agri.	Greenwood
W. A. Latimer, Jr.	Civil	Chester
R. H. Lemmon	Agri.	Fairfield
H. G. Lewis	Agri.	Oconee
P. Lykes	Agri.	Richland
E. D. McCutchan	Mech. Elec.	Sumter
J. W. McLendon	Agri.	Florence
C. W. Mack	Mech. Elec.	Orangeburg
W. J. Latimer	Text.	Abbeville
H. W. Moore	Agri.	Oconee
S. R. Perrin	Text.	Union
D. B. Peurifoy, Jr.	Agri.	Saluda
E. B. Plenge	Mech. Elec.	Charleston
C. T. Pottinger	Mech. Elec.	Chatham, Ga.
P. Quattlebaum	Mech. Elec.	Horry
O. M. Reid	Mech. Elec.	Anderson
S. F. Reid	Agri.	Abbeville
S. R. Rhodes	Mech. Elec.	Florence
R. G. Richardson	Civil	Beaufort
G. DuP. Sanders	Agri.	Barnwell
E. L. Saunders	Civil	York
W. L. Schachte	Mech. Elec.	Charleston
F. B. Schirmer	Civil	Charleston
W. O. Scott	Agri.	Edgefield
E. M. Shingler	Civil	Charleston
W. P. Sloan	Agri.	Anderson
P. W. Spencer	Agri.	York
F. M. Stephenson	Mech. Elec.	Lancaster
W. H. Stevens	Agri.	Greenville
W. L. Stone	Mech. Elec.	Colleton

NAME	COURSE	COUNTY
A. B. Taylor	Civil	Pickens
R. R. Tolbert	Agri.	Greenwood
C. W. Wannamaker	Civil	Orangeburg
W. W. Wannamaker	Agri.	Orangeburg
L. S. Wolfe, Jr.	Agri.	Orangeburg
O. D. Wood	Mech. Elec.	Greenville
W. H. Wylie, Jr.	Mech. Elec.	York

Junior Class

M. H. Ackerman	Agri.	Colleton
T. S. Allen	Mech. Elec.	Abbeville
J. E. Alverson	Agri.	Spartanburg
S. E. Bailes	Agri.	Lancaster
A. J. Baker	Agri.	Horry
A. F. Beaver	Mech. Elec.	Richmond, Ga.
G. D. Bellinger, Jr.	Mech. Elec.	Barnwell
J. O. Bethea	Agri.	Marlboro
S. C. Blease	Agri.	Saluda
L. C. Boone	Civil	Orangeburg
J. L. Boyd	Mech. Elec.	Laurens
E. B. Brown	Agri.	Anderson
H. H. Brunson	Agri.	Orangeburg
J. M. Bryan	Civil	Charleston
C. W. Busch	Agri.	Aiken
W. E. Campbell	Civil	Beaufort
C. L. Cannon	Agri.	Newberry
R. B. Carpenter	Mech. Elec.	Pickens
F. P. Caughman	Agri.	Richland
J. S. H. Clarkson	Agri.	Richland
B. H. Covington	Agri.	Marlboro
F. J. Crider	Agri.	Orangeburg
F. W. Crisp	Agri.	Laurens
E. P. Crouch	Civil	Charleston
R. C. Dick	Metallurgy	Kershaw
J. H. Earle	Civil	Pickens
W. J. Evans	Civil	Abbeville
B. B. Ezell	Agri.	Spartanburg

NAME	COURSE	COUNTY
S. J. Ezell	Agri.	Spartanburg
R. H. Fike	Agri.	Spartanburg
L. E. Fitzsimmons	Civil	Charleston
D. P. Folk	Agri.	Bamberg
D. M. Fraser	Agri.	Barnwell
H. H. Fuller	Agri.	Laurens
M. J. Funchess	Agri.	Orangeburg
E. V. Garrett	Civil	Laurens
W. P. Gee	Agri.	Union
M. M. Glasser	Mech. Elec.	Charleston
J. D. Graham	Agri.	Sumter
T. Hamilton, Jr.	Agri.	Hampton
J. H. Harvey	Agri.	Berkeley
D. N. Harris	Civil	Spartanburg
T. C. Heyward	Mech. Elec.	Beaufort
E. L. Hutchins	Agri.	Pickens
C. C. Johnson	Agri.	Spartanburg
E. M. Jones	Mech. Elec.	Sumter
A. G. Kennedy	Metallurgy	Union
M. R. Kimbrell	Mech. Elec.	York
W. W. Kirven	Agri.	Darlington
W. W. Kirk	Mech. Elec.	Abbeville
E. S. Kohn	Mech. Elec.	Newberry
J. C. LaBorde	Agri.	Richland
J. J. LaRoche	Mech. Elec.	Charleston
A. C. Lee	Civil	Anderson
J. P. Lewis, Jr.	Mech. Elec.	Oconee
J. W. Lewis	Agri.	Horry
J. C. Littlejohn	Mech. Elec.	Union
R. B. Lowry	Agri.	Chester
J. E. Lunn	Agri.	Florence
W. M. Lunn	Agri.	Florence
N. Lykes	Agri.	Richland
W. A. Mace	Agri.	Marion
J. M. Massey	Mech. Elec.	York
C. W. Marston	Agri.	Henrico, Va.
F. L. Martin	Agri.	Horry

NAME	COURSE	COUNTY
L. E. May	Agri.	Charleston
W. H. Maynard	Agri.	Greenwood
J. M. Miller	Mech. Elec.	Lexington
C. McCaslan	Civil	Greenwood
J. T. McLane	Agri.	Abbeville
C. E. McLean	Agri.	Chesterfield
C. A. McLendon	Agri.	Lee
J. McG. Napier	Agri.	Marlboro
T. L. Ogier, Jr.	Agri.	Charleston
O. M. Page	Civil	Marion
J. R. Pennell	Civil	Anderson
J. A. Phillips	Agri.	Orangeburg
R. O. Poag	Mech. Elec.	York
W. O. Pratt	Civil	Greenwood
J. E. Reaves	Mech.	Marion
R. A. Reid	Civil	Aiken
C. W. Rice	Agri.	Bamberg
L. G. Richardson	Agri.	Barnwell
H. B. Riser	Mech. Elec.	Laurens
H. L. Rivers	Civil	Greenwood
W. J. Roach	Agri.	York
T. G. Robertson	Agri.	Laurens
O. Roper	Agri.	Marlboro
W. McL. Rosborough	Mech. Elec.	Chester
W. H. Rumff	Agri.	Orangeburg
J. B. Ryan	Agri.	Sumter
M. L. Sandifer	Agri.	Bamberg
W. H. Scott	Agri.	Edgefield
R. G. Sessions	Agri.	Horry
S. H. Sherard	Agri.	Greenwood
E. H. Shuler	Mech. Elec.	Aiken
F. W. Smith	Mech. Elec.	Marion
G. W. Speer, Jr.	Agri.	Abbeville
J. Spratt	Civil	Chester
W. B. Stanley	Mech. Elec.	Richland
C. LeR. Stevens	Agri.	Berkeley
H. K. Strickland	Agri.	Colleton

NAME	COURSE	COUNTY
H. K. Sullivan	Civil	Anderson
A. C. Summers	Agri.	Orangeburg
W. K. Tavel, Jr.	Civil	Charleston
W. A. Thomas	Agri.	Marlboro
E. J. Thornhill	Agri.	Dorchester
D. L. Tindal	Agri.	Clarendon
C. M. Trott, Jr.	Civil	Charleston
G. M. Truluck	Agri.	Sumter
G. Warren	Agri.	Colleton
L. O. Watson	Agri.	Greenwood
G. G. Weathersbee	Agri.	Aiken
W. N. Wells	Agri.	Lee
J. S. Wessinger	Agri.	Lexington
H. C. Wilburn	Agri.	Union
M. G. Williams	Mech.	Pickens
F. B. Wise	Agri.	Florence

Sophomore Class

R. E. Adams	Civil.	Edgefield
S. L. Allan	Mech. Elec.	Dorchester
J. L. Aull	Agri.	Newberry
C. E. Baldwin	Agri.	Greenville
B. F. Ballew, Jr.	Agri.	Laurens
G. M. Barnett	Agri.	Oconee
A. P. Bethea	Agri.	Marion
D. L. Bissell	Agri.	Charleston
J. R. Blair	Civil	York
R. E. Blake	Agri.	Abbeville
J. L. Boyd	Mech. Elec.	Laurens
L. B. Brandon	Agri.	York
T. L. Brice	Metallurgy	Fairfield
D. C. Britt	Mech. Elec.	Abbeville
W. J. Brockinton	Agri.	Williamsburg
G. A. Burton	Civil	Newberry
L. H. Butler	Civil	Georgetown
L. P. Byars	Agri.	Marion
E. J. Carpenter	Mech. Elec.	Cherokee

NAME	COURSE	COUNTY
J. K. Carwile	Civil	Abbeville
E. Chamness	Mech. Elec.	Marlboro
O. M. Clark	Mech. Elec.	Lexington
W. C. Clark	Agri.	Lee
E. D. Clement	Agri.	Charleston
I. N. Colclough	Metallurgy	Clarendon
L. A. Coleman	Mech. Elec.	Florence
S. Coles	Agri.	Richland
J. C. Covington	Civil	Marlboro
W. H. Cunningham	Civil	Lancaster
W. G. Dominick	Mech. Elec.	Newberry
J. L. Dove	Agri.	Fairfield
J. L. Eason	Agri.	Charleston
W. L. Easterlin	Civil	Colleton
C. W. Fant	Civil	Anderson
J. O. Field	Agri.	Pickens
F. Flemming	Agri.	Greenville
A. K. Folger	Civil	Cherokee
J. T. Folk	Civil	Newberry
T. Fulmer	Mech. Elec.	Saluda
F. L. Gandy	Agri.	Darlington
S. T. Gallman	Agri.	Newberry
J. J. Gantt	Civil	Charleston
E. A. Gardner	Civil	Aiken
L. Gardner	Civil	Darlington
E. E. Gary	Agri.	Greenville
R. T. Gaston	Mech. Elec.	Cherokee
P. McD. Gee	Mech. Elec.	Union
C. H. Goldsmith	Agri.	Greenville
J. O. Graham	Agri.	Williamsburg
F. B. Green	Mech. Elec.	York
H. H. Green	Agri.	Abbeville
A. Grier	Mech.	Sumter
G. A. Hanna	Agri.	Hampton
A. R. Happoldt	Mech. Elec.	Charleston
A. L. Harris	Agri.	Spartanburg
R. A. Harris	Mech. Elec.	Laurens

NAME	COURSE	COUNTY
J. C. Harrison	Civil	Colleton
E. C. Haskell	Mech. Elec.	Abbeville
J. L. Hawley	Mech. Elec.	Fairfield
M. R. Hirsch	Mech. Elec.	Charleston
E. R. Horton, Jr.	Civil	Anderson
A. C. Hunter	Agri.	Newberry
B. G. Hunter	Mech. Elec.	Anderson
T. M. Hunter	Mech. Elec.	Newberry
W. G. Hyrne	Mech. Elec.	Colleton
R. P. Jeter	Metallurgy	Union
W. F. R. Johnson	Civil	Marion
S. Jordan	Mech. Elec.	Chester
G. W. Keitt	Agri.	Pickens
S. O. Kelly	Mech. Elec.	Lee
A. W. Kreamer	Mech. Elec.	Greenville
J. H. Lesesne	Mech. Elec.	Charleston
J. N. Loadholt	Civil	Barnwell
G. C. McCelvey	Agri.	Abbeville
L. deB. McCrady	Civil	Charleston
W. S. McCrady	Civil	Charleston
H. W. McIver	Mech. Elec.	Chesterfield
J. N. McLaurin	Agri.	Kershaw
K. McLaurin	Agri.	Sumter
J. P. McMillan	Mech. Elec.	Marion
A. M. McWhirter	Civil	Union
E. C. Martin	Agri.	Anderson
P. Miley	Agri.	Hampton
H. P. Moore	Agri.	Sumter
J. D. Murray	Mech. Elec.	Colleton
P. A. Murray	Metallurgy	Charleston
W. L. Nance	Agri.	Laurens
R. E. Nickles	Agri.	Abbeville
C. P. Norris	Civil	Anderson
W. F. Odom	Agri.	Barnwell
W. P. Pagett	Agri.	Richland
B. L. Parnell	Agri.	Darlington
S. O. Pegues	Text.	Marlboro

NAME	COURSE	COUNTY
C. H. Pennell	Metallurgy	Abbeville
W. C. Pitts	Civil	Laurens
E. P. Porcher	Mech. Elec.	Charleston
J. C. Pridmore	Agri.	Cherokee
McQ. Quattlebaum	Civil	Horry
T. B. Reeves	Agri.	Laurens
J. C. Reid	Mech. Elec.	Spartanburg
C. M. Robbs	Civil	Cherokee
C. P. Roberts	Civil	Greenwood
W. A. Robinson	Civil	Pickens
F. E. Rogers	Mech. Elec.	Darlington
L. B. Rogers	Agri.	Marion
G. D. Ryan	Mech. Elec.	Sumter
H. K. Sanders	Agri.	Chester
W. J. Sheely	Agri.	Newberry
J. B. Simpson	Civil	Anderson
W. D. Simpson	Civil	Anderson
H. L. Smith	Civil	Georgetown
W. C. Spratt	Mech. Elec.	Chester
F. G. Tarbox	Agri.	Georgetown
J. A. Teague	Civil	Laurens
E. T. Thornhill	Agri.	Dorchester
M. L. Tyler	Agri.	Aiken
H. C. Twiggs	Civil	Greenwood
Hugh E. Vincent	Mech. Elec.	Hampton
B. Walsh, Jr.	Mech. Elec.	Sumter
V. L. Warner	Agri.	Greenwood
D. W. Watkins	Agri.	Anderson
E. Weeks	Agri.	Aiken
A. C. Whittle	Agri.	Saluda
C. Y. Wigfall	Agri.	Charleston
P. H. Wilkes	Mech. Elec.	Chester
J. H. Wilson	Mech. Elec.	Chester
B. E. Wolff	Agri.	Laurens
E. H. Wood	Mech. Elec.	Cherokee
C. M. Wootan	Mech. Elec.	Chester
J. Wylie	Agri.	Chester

NAME	COURSE	COUNTY
J. McF. Wylie	Civil	York
T. H. Yeargin	Mech. Elec.	Laurens
A. C. Young	Agri.	Richland

Freshman Class

W. McA. Albergotti	Mech.	Orangeburg
T. L. Alford	Mech.	Marion
W. Allen	Agri.	Spartanburg
M. W. Arthur	Mech.	Union
H. R. Bailey	Mech.	Barnwell
F. R. Baker, Jr.	Mech.	Charleston
R. F. Bankhead	Agri.	York
J. M. Barr	Mech.	Lexington
W. D. Barnett	Mech.	Oconee
W. A. Barnette	Agri.	York
P. A. Baxley	Agri.	Barnwell
M. W. Beach	Mech.	Colleton
D. C. Beaty	Mech.	Union
A. J. Becker	Agri.	Spartanburg
H. F. Bethea	Agri.	Marion
J. E. C. Bischoff	Mech.	Charleston
L. F. Blackman	Agri.	Darlington
J. C. Blalock	Mech.	Cherokee
W. C. Bolt	Mech.	Laurens
R. E. Bowen, Jr.	Agri.	Pickens
B. K. Boylston	Mech.	Aiken
B. D. Boykin	Mech.	Kershaw
E. M. Boykin	Mech.	Kershaw
H. A. Boykin	Mech.	Sumter
H. W. Brinson	Mech.	Greenwood
J. E. Brown	Mech.	Anderson
J. M. Buckner	Agri.	Barnwell
J. H. Bull	Mech.	Sumter
N. E. Byrd	Mech.	Orangeburg
A. M. Campbell, Jr.	Mech.	Charleston
J. N. Carothers	Mech.	York
G. T. Cassels	Agri.	Fairfield

NAME	COURSE	COUNTY
D. B. Clayton	Mech.	Fairfield
H. R. Clinkscales	Agri.	Fairfield
R. M. Coleman	Mech.	Fairfield
H. P. Cooper	Agri.	Fairfield
L. W. Corbett	Mech.	Lee
A. B. Craig	Mech.	Fairfield
B. L. Crawford	Mech.	York
J. W. Crawford	Mech.	Anderson
H. J. Crook	Mech.	Orangeburg
W. C. Crum, Jr.	Mech.	Orangeburg
H. S. Davis	Mech.	Charleston
E. Dewitt	Agri.	Florence
S. F. Donnalld	Mech.	Anderson
J. F. Dorroh	Mech.	Laurens
C. A. Dorrill	Mech.	Georgetown
J. L. DuBose	Agri.	Darlington
C. A. Dukes	Agri.	Orangeburg
O. O. Dukes	Agri.	Dorchester
R. A. Earle	Agri.	Greenville
K. Easterling	Mech.	Marlboro
P. T. Easterling	Mech.	Florence
C. M. Emanuel	Mech.	Sumter
E. E. Epting	Agri.	Anderson
C. D. Evans	Mech.	Abbeville
S. E. Evans	Agri.	Clarendon
C. W. Fant	Mech.	Anderson
G. C. Fant	Mech.	Anderson
C. B. Farmer	Mech.	Barnwell
E. R. Fetner	Mech.	Richland
G. T. Floyd	Mech.	Williamsburg
W. A. Fridy	Mech.	Union
S. B. Gandy	Mech.	Darlington
G. D. Garner	Agri.	Barnwell
F. C. Gilbert	Mech.	Newberry
E. S. F. Giles	Mech.	Greenwood
A. E. Gilmore	Mech.	Union
J. D. Good	Agri.	York

NAME	COURSE	COUNTY
W. S. Goodman	Mech.	Oconee
C. Y. Gosset	Mech.	Anderson
O. H. Graham	Mech.	Williamsburg
P. P. Gregorie	Mech.	Charleston
T. C. Haile	Agri.	Kershaw
A. M. Hall	Agri.	Lancaster
E. H. Hanna	Agri.	Hampton
D. T. Hardin	Mech.	Abbeville
B. B. Harris	Agri.	Anderson
J. W. Harrison	Mech.	Spartanburg
W. S. Harvin, Jr.	Mech.	Clarendon
W. McC. Haynsworth	Agri.	Florence
N. E. Head	Mech.	Aiken
J. W. Henagan	Mech.	Orangeburg
R. P. Henderson	Agri.	Greenwood
J. H. Hendricks	Mech.	Pickens
W. H. Hester	Mech.	Greenwood
V. B. Higgins	Mech.	Pickens
J. L. Hill	Mech.	Abbeville
W. McL. Hodge	Agri.	Clarendon
T. G. Hope	Agri.	York
A. L. Howell	Mech.	Colleton
J. E. Hydrick	Agri.	Orangeburg
O. A. Hydrick	Mech.	Orangeburg
C. F. Furman	Agri.	Cherokee
G. A. Jeffords	Agri.	Darlington
J. E. Jenkins	Agri.	Richland
F. H. Jeter	Mech.	Union
H. S. Johnson	Agri.	Florence
J. L. Johnson	Mech.	Lexington
R. G. Jones	Agri.	Sumter
W. S. Jones	Mech.	Sumter
C. M. Kavanaugh	Agri.	Chesterfield
J. F. Keel	Agri.	Barnwell
J. B. Keith	Agri.	Florence
J. E. Kirby	Mech.	Spartanburg
J. S. Knox	Agri.	Oconee

NAME	COURSE	COUNTY
A. S. Lachicotte	Mech.	Georgetown
G. E. Lachicotte	Agri.	Georgetown
T. G. Ladshaw	Mech.	Spartanburg
L. L. LaRoche	Mech.	Charleston
B. F. Lawrence	Mech.	York
A. W. Leland, Jr.	Mech.	Charleston
L. S. Lindler	Mech.	Lexington
P. H. Lipscomb	Mech.	Cherokee
R. McG. Littlejohn	Mech.	Union
R. L. Love	Mech.	Spartanburg
R. W. Lowery	Mech.	Oconee
G. L. McCord	Mech.	Abbeville
O. P. McCord	Mech.	Greenwood
E. C. McCown	Agri.	Anderson
F. M. McCown	Mech.	Anderson
J. H. McDaniel	Mech.	Anderson
A. McDavid	Mech.	Abbeville
A. H. McDermid	Mech.	Richland
E. B. McElween	Agri.	Florence
R. H. McFadden	Agri.	York
A. A. McKeown	Agri.	Chester
C. McLaurin	Agri.	Sumter
H. McN. McLure	Mech.	Lee
J. P. Major	Mech.	Anderson
T. R. Marion	Mech.	Chester
W. J. Marshall	Agri.	Greenwood
L. M. Massey	Agri.	York
J. McQ. Martin	Mech.	Horry
B. W. Martin	Mech.	Greenville
H. H. Martin	Mech.	Anderson
C. F. Middleton, Jr.	Mech.	Charleston
S. L. Miller	Mech.	Chester
J. C. Milling	Mech.	Greenwood
W. H. Morgan	Mech.	Union
O. A. Morrah	Mech.	Abbeville
W. L. Morrison	Mech.	Charleston
J. P. Muse	Mech.	Greenwood

NAME	COURSE	COUNTY
G. O'N. Manchester	Mech.	Spartanburg
T. T. Neves	Mech.	Greenville
W. W. Newman	Mech.	Chesterfield
C. W. Neyle	Agri.	Charleston
W. Osborne	Mech.	Spartanburg
J. D. O'Bryan	Mech.	Williamsburg
T. R. Owen	Mech.	Union
E. Parker	Mech.	Sumter
F. F. Parker	Mech.	Spartanburg
W. H. Phillips	Mech.	Orangeburg
E. H. Pinckney	Agri.	Charleston
H. B. Pitts	Mech.	Sumter
B. F. Poe	Mech.	Greenville
H. D. Plenge	Mech.	Charleston
J. S. Pyatt	Agri.	Georgetown
S. T. Ramsey	Mech.	Abbeville
A. P. Ramson	Mech.	Anderson
C. B. Ray	Mech.	Bamberg
H. L. Reaves	Agri.	Marion
J. C. Rhea	Mech.	York
J. W. Rhyne	Mech.	Cherokee
J. M. Ridgill	Agri.	Clarendon
L. D. Rogers	Agri.	Darlington
M. McK. Roddey	Mech.	Chester
F. L. Ross	Mech.	Cherokee
G. L. Salley, Jr.	Mech.	Orangeburg
T. R. Salley	Mech.	Orangeburg
C. Anderson Sanders	Mech.	Colleton
C. Ayer Sanders	Agri.	Beaufort
O. T. Sanders	Agri.	Sumter
W. E. Seabrook	Mech.	Charleston
J. A. Self	Agri.	Edgefield
M. B. Shealy	Mech.	Lexington
J. J. D. Shuler	Mech.	Lexington
K. B. Shuler	Mech.	Lexington
E. T. Simons	Mech.	Berkeley
M. D. Sims	Mech.	York

NAME	COURSE	COUNTY
A. F. Simpson	Mech.	Laurens
R. M. Simpson	Agri.	Chester
E. N. Sitton	Mech.	Anderson
A. R. Smarr	Agri.	York
C. McC. Sondley	Mech.	Abbeville
F. E. Spears	Agri.	Union
J. T. Stephenson	Mech.	Lancaster
E. L. Summer	Mech.	Darlington
L. W. Summers	Agri.	Orangeburg
S. Swygert	Mech.	Laurens
J. D. Thomas	Mech.	Marlboro
F. S. Thomason	Mech.	Spartanburg
L. C. Thompson	Mech.	Richland
C. P. Townsend	Mech.	Marlboro
L. T. Tobin	Mech.	Barnwell
J. Y. Todd	Mech.	Abbeville
C. H. Trott	Mech.	Charleston
W. S. Walker	Agri.	Barnwell
V. S. Wall	Mech.	Marion
W. M. Wall	Agri.	Marion
O. L. Walter	Mech.	Newberry
J. B. Washington, Jr.	Mech.	Orangeburg
L. D. Webb	Mech.	Anderson
J. L. Welborn	Agri.	Anderson
L. J. Welch	Mech.	Union
C. L. White	Mech.	Laurens
J. St. C. White.	Mech.	Berkeley
W. P. White	Mech.	Laurens
W. M. Wiggins	Agri.	Marion
J. M. Wilkinson	Mech.	Abbeville
D. H. Wilson	Mech.	Laurens
G. F. Wilson	Agri.	Darlington
J. H. Woodbury	Mech.	Williamsburg
M. H. Wyman	Agri.	Aiken
L. T. Wyndham	Mech.	Berkeley
D. G. Yarborough	Mech.	Fairfield

Preparatory Class

H. W. Anderson	Colleton
T. D. Arant	Orangeburg
F. T. Arnold	Anderson
R. O. Atkinson	Chester
E. Baxter	Bamberg
A. H. Bentley	Greenville
O. M. Blanton	Horry
B. B. Blease	Saluda
E. R. Bond	Anderson
P. S. Bauknight	Saluda
H. G. Boynton	Barnwell
T. J. Boykin	Darlington
C. C. Boylston	Aiken
W. McG. Bowen	Pickens
J. I. Bradford	Sumter
J. A. Breazeale	Anderson
O. B. Brodie	Oconee
N. A. Bussey	Edgefield
R. H. Cain	Florence
D. A. Cannon	Newberry
P. G. Coleman	Saluda
E. O. Connor	Colleton
S. M. Connor	Colleton
A. E. Corley	Barnwell
D. H. Covington	Marlboro
D. H. Crocker	Spartanburg
E. Cromer	Anderson
J. I. Crowther	Abbeville
H. C. Dominick	Newberry
H. L. Dominick	Newberry
O. M. Doyle	Pickens
M. DuBose	Darlington
J. W. Duckworth	Anderson
J. C. DuPre	Laurens

C. S. Evans.....	Pickens
R. G. Erwin.....	Anderson
M. Fudge	Chester
J. W. Gantt, Jr.....	Anderson
J. O. Garland.....	Clarendon
J. H. Geiger.....	Lexington
W. N. Ginn.....	Hampton
L. J. Goodman.....	Oconee
R. G. Gwaltney.....	Fairfield
W. H. Hanckel.....	Anderson
C. Holmes	Edgefield
J. J. Hunter.....	Laurens
G. G. Inman.....	Cherokee
E. I. Jeffords.....	Darlington
T. McD. Johnston.....	Kershaw
J. A. Joyner.....	Richland
R. B. Kay.....	Pickens
H. O. Kaigler.....	Lexington
W. D. Keasler.....	Anderson
M. A. Laney.....	Chesterfield
Robt. Lebbby	Charleston
S. I. Lenoir.....	Sumter
W. M. Lenoir.....	Sumter
M. McCown	Anderson
E. T. McDaniel.....	Anderson
R. D. McFaddin.....	Clarendon
T. J. McIntosh.....	Lee
W. R. Marvin.....	Colleton
S. A. Miller, Jr.....	Lexington
T. R. Miller.....	Barnwell
A. R. Mitchell.....	Charleston
P. B. Morange.....	Abbeville
T. P. Nisbet.....	Lancaster
D. S. Oliver.....	Berkeley
L. B. Parris.....	Spartanburg

W. C. Patrick.....	Hampton
F. M. Rast.....	Orangeburg
T. C. Redfern.....	Oconee
J. J. Reedy.....	Marlboro
W. T. Reeves.....	Fairfield
W. H. Rentz.....	Hampton
B. T. Rice, Jr.....	Barnwell
J. D. Royal.....	Charleston
C. B. Sanders.....	Sumter
R. M. Sanders.....	Sumter
W. J. Sanders.....	Sumter
A. E. Schilletter.....	Oconee
J. T. Shirley.....	Anderson
L. B. Smith.....	Spartanburg
Z. G. Smith.....	Anderson
E. L. Stevenson.....	Fairfield
W. J. Stevenson.....	Fairfield
F. F. Stokes.....	Greenville
C. B. Strom.....	Edgefield
J. W. Tate.....	Anderson
P. G. Thompson.....	Anderson
F. J. Ville Ponteaux.....	Berkeley
Henry E. Vincent.....	Hampton
S. G. Venning.....	Charleston
G. H. Warner.....	Greenwood
G. D. Westerlund.....	Bamberg
Geo. Wham.....	Laurens
W. E. Whitlock.....	Williamsburg
C. A. Workman.....	Newberry
E. E. Wyndham.....	Berkeley
W. B. Wright.....	Fairfield

Special Students

O. L. Derrick (B. S. Clemson College), Text...Lexington
C. D. Gentry, Textile.....Greenville
F. T. Hamlin (B. S. Clemson College), Civil Eng. Anderson
T. E. Keitt (B. S. Clemson College), Chemistry...Pickens
J. C. Summers (B. S. Clemson College), Agri..Orangeburg

Two-Year Course Textile Students

B. L. Bomar, 1st year.....Spartanburg
L. O. Bunton, 2d year.....Greenwood
J. P. Darden, Jr., 1st year.....Spartanburg
G. F. Garlington, 1st year.....Spartanburg
J. D. Irby, 1st year.....Spartanburg
W. P. Irwin, 1st year.....Spartanburg
C. F. Lokey, 1st year.....Anderson
J. H. Rhyne, 1st year.....Cherokee
H. M. Turner, 1st year.....Laurens

Irregular Students

R. L. Allston, Agri.....Georgetown
W. A. Keenan, Mech. Elec.....Richland

Summaries**By Classes**

Seniors	75
Juniors	118
Sophomores	133
Freshmen	216
Preparatory	100
Special	5
Short Course Textile.	9
Irregular	2
Total	658

By State

South Carolina	653
Georgia	4
Virginia	1

By Counties in South Carolina

Abbeville	27
Aiken	11
Anderson	50
Bamberg	6
Barnwell	20
Beaufort	5
Berkeley	8
Charleston	46
Cherokee	13
Chester	19
Chesterfield	5
Clarendon	8
Colleton	18
Darlington	16
Dorchester	4
Edgefield	8

Fairfield .. .	16
Florence .. .	14
Georgetown .. .	8
Greenville .. .	15
Greenwood .. .	25
Hampton .. .	10
Horry .. .	9
Kershaw .. .	6
Lancaster .. .	6
Laurens .. .	27
Lee .. .	7
Lexington .. .	14
Marion .. .	17
Marlboro .. .	14
Newberry .. .	17
Oconee .. .	12
Orangeburg .. .	29
Pickens .. .	17
Richland .. .	17
Saluda .. .	7
Spartanburg .. .	27
Sumter .. .	27
Union .. .	17
Williamsburg .. .	7
York .. .	24

Total, South Carolina..... 653

INDEX

	PAGES
Academic department.....	114
Admission of students.....	24
Agricultural buildings.....	61
Agricultural courses.....	30- 37
Agricultural department.....	87
Agricultural scholarships.....	53
Agricultural equipment.....	66
Agricultural instruction.....	89
Alumni, 1896-1906, list of.....	160- 182
Alumni organizations.....	159
Analyses, information, etc.....	143
Animal industry course.....	34
Animal industry and dairying equipment.....	68
Animal industry and dairy instruction.....	95
Athletics.....	133
Bacteriology and botany equipment.....	69
Bacteriology and botany instruction.....	96
Barracks.....	59
Band.....	17
Board of Health.....	12
Board of Trustees.....	4
Board of Visitors.....	6
Botany and bacteriology equipment.....	69
Botany and bacteriology instruction.....	96
Buildings and grounds.....	57- 65
Bulletins, Experiment Station.....	142
Bulletins, Popular Science.....	143
Cadet Band.....	17
Cadet Exchange.....	133
Calendar.....	3
Calhoun mansion.....	64
Calhoun relics.....	83
Care of the sick.....	130
Chapel services.....	128
Chemical buildings.....	64
Chemical department.....	105
Chemistry and metallurgy equipment.....	76

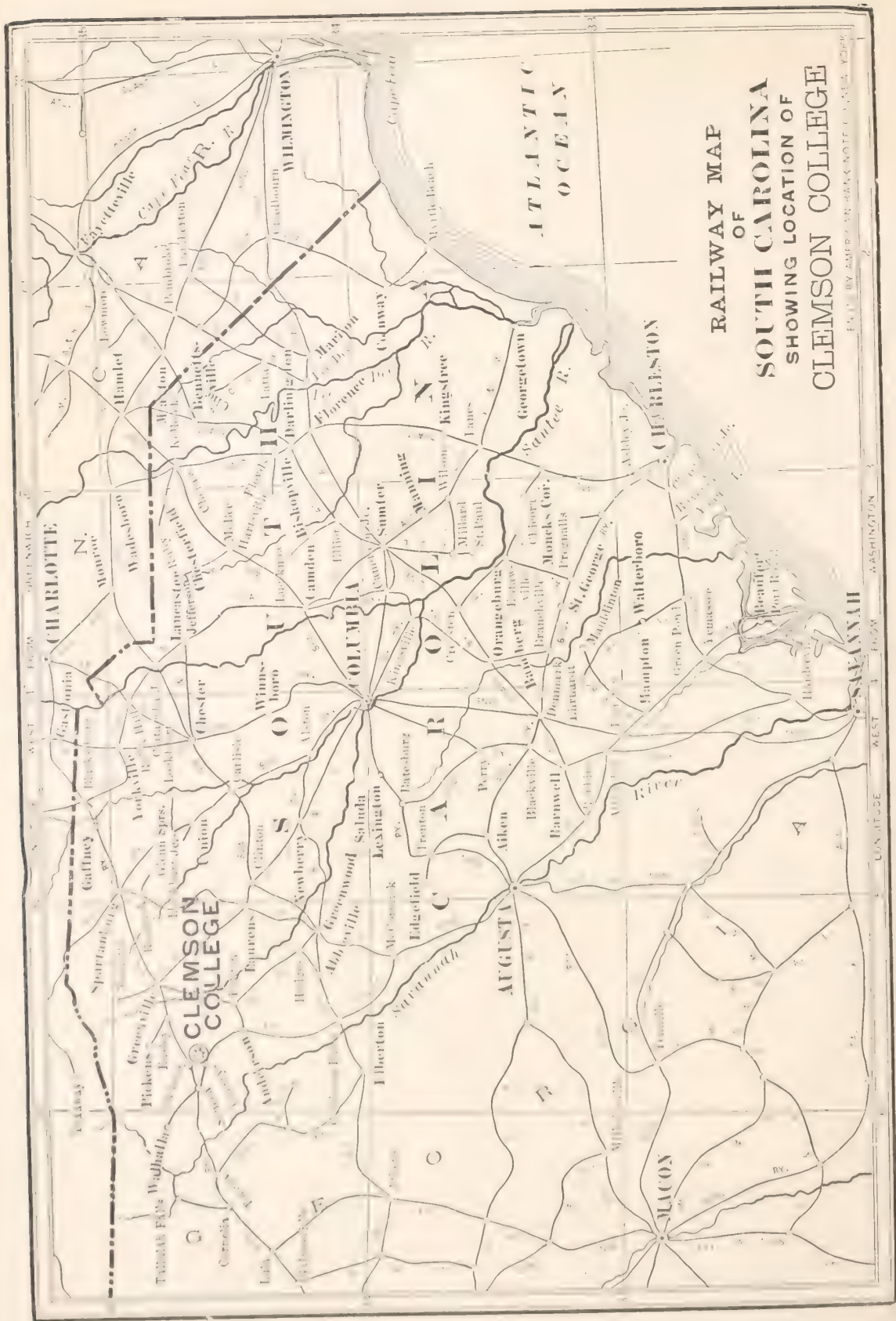
	PAGES
Chemistry and metallurgy instruction.....	105
Civil engineering course.....	40, 41
Civil engineering equipment.....	82
Civil engineering instruction.....	118
Clemson pictures.....	83
Clemson's will.....	144
College officers.....	12
Committees of the Board.....	5
Committees of the Faculty.....	4
Courses of Study.....	30- 43
Course I. Agriculture.....	30, 31
Course Ia. Agriculture and chemistry.....	32, 33
Course II. Agriculture and animal industry.....	34, 35
Course III. Chemistry and geology.....	36, 37
Course IV. Mechanical and electrical engineering.....	38, 39
Course V. Civil engineering.....	40, 41
Course VI. Textile industry.....	42, 43
Special and irregular courses.....	44- 47
Dairying and animal industry equipment.....	68
Dairying and animal industry instruction.....	95
Degrees, medals and honors.....	49
Departments of the College.....	87
Agricultural department.....	89
Mechanical and electrical department.....	98
Chemical department.....	105
Textile department.....	106
Academic department.....	114
Military department.....	121
Preparatory department.....	47
Descriptions of courses of instruction.....	89- 121
Donations to the College.....	135
Drawing and designing equipment.....	73
Drawing and designing instruction.....	101
Electrical engineering course.....	39
Electrical engineering equipment.....	69
Electrical engineering instruction.....	98
English.....	114
Entomology and Zoology equipment.....	68
Entomology and Zoology instruction.....	94
Entrance examinations.....	27
Entrance requirements.....	25

	PAGES
Equipment for practical instruction.....	66- 83
Exchange.....	133
Expenses and fees.....	52
Experiment Station and inspection work.....	142
Experiment Station staff.....	13
Faculty.....	7- 10
Farmers' institutes.....	143
Fees and expenses.....	52
Field day.....	134
Forge and foundry equipment.....	74
Forge and foundry instruction.....	102
Free tuition.....	53
General information.....	123- 142
General regulations.....	127
Geology and chemistry course.....	36, 37
Geology and mineralogy equipment.....	66
Geology and mineralogy instruction.....	90
Government of the College.....	125
Grades, reports and promotions.....	48
Graduates, 1896-1906, list of.....	160- 182
Grounds and buildings.....	59
Heat, light and water.....	65
Historical sketch of the College.....	21- 24
History and political economy.....	115
Honors, degrees and medals.....	49
Horticulture equipment.....	62
Horticulture instruction.....	92
Hotel and residences.....	64
Inspection officers.....	13
Inspection and Experiment Station work.....	142
Irregular courses.....	47
Laboratory and shop equipment.....	66- 83
Laws relating to the College.....	142- 158
Leaves of absence.....	126
Lecture course.....	132
Library.....	83
Light, heat and water.....	65
List of graduates, 1896-1906.....	160- 182
List of graduates, 1906.....	183
List of students, 1906-1907.....	185
Literary societies.....	131

	PAGES
Location of the College.....	21
Machine shop equipment.....	74
Machine shop instruction.....	103
Main building.....	59
Mathematics.....	116
Mechanical and electrical buildings.....	63
Mechanical and electrical department.....	98
Mechanical and electrical engineering course.....	39
Mechanical and electrical equipment.....	69
Mechanical engineering equipment.....	72
Mechanical engineering instruction.....	99
Medals, degrees and honors.....	49
Military department.....	121
Military science and tactics.....	121
Mineralogy and geology equipment.....	66
Mineralogy and geology instruction.....	90
Ministers for session 1906-1907.....	14
Officers of the College.....	12
Oratorical Association, State.....	132
Organization and government of the College.....	125
Physics equipment.....	73
Physics instruction.....	100
Political economy and history.....	115
Popular science bulletins.....	143
Preparatory course.....	47
Prescribed courses of study.....	30- 43
Publications by students.....	132
Regimental organization.....	15, 16
Regulations, general.....	127
Regulations governing athletics.....	133
Religious exercises.....	128
Reports, grades and promotions.....	48
Reports to parents.....	3, 48
Requirements for admission.....	25
Residences and hotel.....	64
Scholarships, agricultural.....	53
Science Club.....	132
Shop and laboratory equipment.....	66- 83
Sick, care of.....	130
Societies, literary.....	131
Soil physics equipment.....	67

PAGES

Soil physics instruction.....	89
Special courses.....	44
State Chemist and inspection officers.....	13
State Oratorical Association.....	132
Student labor.....	131
Students, 1906-1907, list of.....	185
Summaries by classes, states and counties.....	204
Sunday school.....	129
Textile building.....	64
Textile department.....	77
Textile industry course.....	42, 43
Textile industry equipment.....	77
Textile industry instruction.....	106
Tuition, fees, etc.....	52
Veterinary science equipment.....	67
Veterinary science instruction.....	93
Water, light and heat.....	65
Woodwork equipment.....	75
Woodwork instruction.....	104
Young Men's Christian Association.....	129
Zoology and entomology equipment.....	68
Zoology and entomology instruction.....	94



**RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE**

PAID BY AIRPOSTAL NOTE C. W. W. YORK

WASHINGTON WEST 3 FROM WASHINGTON

CATALOGUE

OF THE

CLEMSON

AGRICULTURAL COLLEGE

OF SOUTH CAROLINA

STATE AGRICULTURAL AND MECHANICAL COLLEGE

POSTOFFICE: CLEMSON COLLEGE
TELEGRAPH, EXPRESS AND FREIGHT OFFICES: CALHOUN

1907-1908

FIFTEENTH YEAR

ANNOUNCEMENTS 1908-1909

Columbia, S. C.
THE R. L. BRYAN COMPANY
1908

1908

JULY							SEPTEMBER							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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30	31																			

1909

JANUARY							MARCH							MAY						
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24	25	26	27	28	29	30	28	29	30	31				23	24	25	26	27	28	29
31														30	31					
FEBRUARY							APRIL							JUNE						
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14	15	16	17	18	19	20	11	12	13	14	15	16	17	13	14	15	16	17	18	19
21	22	23	24	25	26	27	18	19	20	21	22	23	24	20	21	22	23	24	25	26
28							25	26	27	28	29	30		27	28	29	30			

COLLEGE CALENDAR

Session 1908—1909

1908.

- Sept. 9-14. Examinations for admission and for removal of conditions.
Sept. 9. Opening of the 16th session; exercises begin at 8:40 a. m.
Nov. 26. Thanksgiving Day: a holiday.
Dec. 23. First day of Christmas recess.

1909.

- Jan. 3. Beginning of the Second Term, 8:40 a. m.
Jan. 19. Lee's Birthday; annual public exercises of the Columbian Literary Society in the evening.
Feb. 22. Washington's Birthday: a holiday.
Annual public exercises of the Palmetto Literary Society in the evening.
Feb. 23. Stated meeting of the Board of Trustees.
Mar. 18. Calhoun's Birthday: a holiday.
Mar. 26. Annual public exercises of the Calhoun Literary Society in the evening.

1909.

- Mar. 15. Beginning of the Third Term, 8:40 a. m.
May 1. A holiday.
Annual track and field athletic contests.
June 6. Beginning of commencement exercises; baccalaureate sermon.
June 7. Address of alumni orator.
Contest of literary society representatives.
Military exercises and graduation parade.
June 8. Commencement Day; address to the graduating class.
Graduating exercises; delivery of diplomas.
July 13. Stated meeting of Board of Trustees.

Reports to Parents

Reports of class standing and discipline will be sent to parents for periods ending on the following dates:

October 23, and December 14,* 1908; February 5, March 12,* April 23, and May 28,* 1909.

Dates marked with an asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

Quarterly Dues

Payable September 9, November 11, 1908; January 25, March 31, 1909.

BOARD OF TRUSTEES

Life Members

HON. ALAN JOHNSTONE, *President*....Newberry, Newberry Co.
 HON. R. W. SIMPSON.....Pendleton, Anderson Co.
 SENATOR B. R. TILLMAN.....Trenton, Edgefield Co.
 HON. R. E. BOWEN.....Easley, Pickens Co.
 HON. M. L. DONALDSON.....Greenville, Greenville Co.
 HON. J. E. WANNAMAKER.....St. Matthews, Orangeburg Co.
 HON. W. W. BRADLEY.....Abbeville, Abbeville Co.

Term Expires 1910

HON. W. D. EVANS.....Cheraw, Marlboro Co.
 HON. L. A. SEASE.....Prosperity, Newberry Co.
 HON. IVY M. MAULDIN.....Pickens, Pickens Co.

Term Expires 1912

HON. JESSE H. HARDIN.....Chester, Chester Co.
 HON. JOHN G. RICHARDS, JR.....Liberty Hill, Kershaw Co.
 HON. COKE D. MANN.....West Union, Oconee Co.

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Executive Committee

Messrs. Donaldson, Bowen, Bradley, Johnstone, Simpson, Mann.

Finance Committee

Messrs. Simpson, Donaldson, Johnstone, Mauldin.

Committee on Fertilizer Control

Messrs. Evans, Wannamaker, Tillman, Mann, Richards.

Experiment Station Committee

Messrs. Tillman, Wannamaker, Donaldson, Evans, Mann.

Farmers' Institute Committee

Messrs. Simpson, Johnstone, Sease, Donaldson, Evans, Tillman.

Entomological Inspection Committee

Messrs. Sease, Donaldson, Wannamaker, Mauldin.

Veterinary Inspection Committee

Messrs. Johnstone, Evans, Bowen, Mauldin, Richards.

Committee on Coast Experiments

Messrs. Wannamaker, Evans, Tillman, Donaldson, Mann.

Campus Committee

Messrs. Tillman, Wannamaker, Evans, Mell.

Farm Committee

Messrs. Sease, Bradley, Bowen.

Board of Visitors for the Session 1908—1909

Meeting First Wednesday in May.

First District—HON. D. MCKAY FROST, Charleston, S. C.

Second District—HON. J. I. QUINBY, Graniteville, S. C.

Third District—HON. J. K. DURST, Greenwood, S. C.

Fourth District—HON. STOBO J. SIMPSON, Spartanburg, S. C.

Fifth District—HON. EDWARD McIVER, Cheraw, S. C.

Sixth District—HON. J. L. COKER, Hartsville, S. C.

Seventh District—HON. A. F. LEVER, Peake Station, S. C.

FACULTY*

PATRICK HUES MELL, PH. D., LL. D.

President.

Agricultural Department

JOSEPH NELSON HARPER, B. S., M. Agr.

Director of Department,

Professor of Agriculture.

FRED HARVEY HALL CALHOUN, PH. D.

Professor of Geology and Mineralogy.

CHARLES CARTER NEWMAN

Associate Professor of Horticulture.

CLIFFORD LEWIS NEWMAN,† M. S.

Associate Professor of Agriculture.

M. RAY POWERS, D. V. S.

Associate Professor of Veterinary Science.

DAVID OLIVER NOURSE, B. S.

Associate Professor of Animal Husbandry and Dairying.

HENRY WALTER BARRE, B. Sc.

Associate Professor of Botany and Bacteriology.

ALBERT F. CONRADI, M. S.

Associate Professor of Zoology and Entomology.

JUNIUS MILTON BURGESS, B. S.

Assistant in Animal Husbandry and Dairying.

ENOCH BARNETT, V. M. D.

Assistant in Veterinary Science.

*The names of the faculty, after that of the President, are arranged in groups in each department: Professors, Associate Professors, Assistant Professors, and Instructors, in the order of their respective appointments.

†Resigned to take effect July 1st.

Mechanical and Electrical Department

WALTER MERRITT RIGGS, E. M. E.

Director of Department,
Professor of Mechanical and Electrical Engineering.

SAMUEL BROADUS EARLE, A. M., M. E.

Associate Professor of Mechanical Drawing.

THOMAS GRAYSON POATS, M. E., E. E.

Associate Professor of Physics.

RUDOLPH EDWARD LEE, B. S.

Associate Professor of Drawing.

JOHN HILLIARD HOOK, B. S.

Assistant Professor of Woodwork.

WILLISTON WIGHTMAN KLUGH, B. S.

Assistant Professor of Drawing.

FRANK TOWNES DARGAN, M. S.

Assistant Professor of Electrical Engineering.

JOHN WEEMS GANTT

Assistant Professor of Forge and Foundry Work.

STYLES TRENTON HOWARD, B. M. E.

Assistant Professor of Machine Work.

FRANK BOGARD, B. M. E.

Instructor in Drawing.

THOMAS HARRIS BURRUS, JR., B. S.

Instructor in Drawing.

ANDREW BURCHIELL GARDNER

Assistant in Woodwork.

ZACK ROBERT LEWIS

Assistant in Forge and Foundry Work.

Department of Chemistry

MARK BERNARD HARDIN

Director of Department,
Professor of Chemistry.

RICHARD NEWMAN BRACKETT, A. B., PH. D.

Associate Professor of Chemistry.

FRANK SCOTT SHIVER,* PH. G.
Assistant Professor of Agricultural Analysis.

DAVID HILL HENRY, B. S.
Assistant Professor of Chemistry.

BENJAMIN FREEMAN,† B. S.
Assistant in Chemistry.

Department of Textile Industry

CHARLES STEBBINS DOGGETT
Director of Department,
Professor of Textile Chemistry and Dyeing.

CLAUDE WIGHTMAN McSWAIN, B. S.
Assistant Professor of Weaving and Designing.

DRAYTON EUGENE EARLE, B. S.
Assistant Professor of Carding and Spinning.

Academic Department

CHARLES MANNING FURMAN, A. B.
Professor of English

WILLIAM SHANNON MORRISON, A. B.
Professor of History and Political Economy.

PAUL THOMAS BRODIE,* B. S., A. B.
Professor of Mathematics and Civil Engineering.

DAVID WISTAR DANIEL, M. A.
Associate Professor of English.

SAMUEL MANER MARTIN, B. S.
Associate Professor of Mathematics.

AUGUSTUS SHANKLIN, B. S.
Registrar and Secretary of the Faculty
Assistant Professor of Mathematics.

THOMAS WADLINGTON KEITT
Assistant Professor of English.

*Died December 30, 1907.

†Acting Instructor in Chemistry.

*Died November 3, 1907.

ARTHUR BUIST BRYAN, B. S., B. Litt.
Assistant Professor of English.

HALE HOUSTON, C. E.
Associate Professor of Applied Mathematics in Civil Engineering.

JOSEPH EVERETT HUNTER, B. S.
Assistant Professor of Mathematics.

MARK EDWARD BRADLEY, A. B.
Assistant Professor of English.

BURR HARRISON JOHNSTONE, A. B.
Assistant Professor of Mathematics.

ANDREW BRAMLETT, B. S.
Assistant Professor of Mathematics.

Military Department

JOSIAH C MINUS
Captain U. S. Army, Commandant of Cadets
Professor of Military Science and Tactics

Preparatory Department

ALESTER GARDEN HOLMES, B. S.
Instructor in English, History and Geography.

The following members of the Collegiate Faculty also instruct the Preparatory Class in the subjects indicated:

ASSISTANT PROFESSOR BRADLEY, English
ASSISTANT PROFESSOR JOHNSTONE, Mathematics.

Standing Committees of the Faculty

The President is *ex officio* a member of each committee.

The first named in each instance is chairman.

Discipline Committee

President Mell, Professors Hardin, Furman, Morrison, Brodie, Riggs, Calhoun, Harper, Doggett, Minus.

Committee on Examinations

Professors Brodie, Furman, Morrison, Riggs, Calhoun.

Schedule Committee

Professors Morrison, Brackett, Furman, Riggs, Lee, Brodie, Doggett, Harper, Minus.

Library Committee

Professors Bryan, Calhoun, Doggett, Earle, S. B., Henry.

Committee on Preparatory Department

Professors Furman, Morrison, Brodie.

Committee on Irregular Students

Professor Houston, Klugh, Newman, C. L., Earle, D. E., Howard.

Committee on Chapel Services

Professors Earle, S. B., Lee, Keitt, Bradley, Brackett.

Committee on Chapel Music

Professors Riggs, Hook, Bryan.

Committee on Lectures and Lyceum

Professors Daniel, Martin, Klugh, Houston, Dargan.

Committee on Extension Work

Professors Hardin, Riggs, Doggett, Harper, Minus.

Committee on Alumni

Professors Shanklin, Lee, Henry.

Committee on Athletics

Professors Riggs, Daniel, Shanklin, Calhoun, Gantt, Poats.

Catalogue Committee

Professors Earle, S. B., Brackett, McSwain, Shanklin, Powers.

Museum Committee

Professors Calhoun, Barre, Conradi

Students Publication Committee

Professors Keitt, Bradley, Johnstone, Shiver.

Student Entertainment Committee

Professors Minus, Riggs, Henry, Newman, C. C., Hunter.

Officers of the College

PATRICK HUES MELL, PH. D., LL. D.
President.

JOSIAH C. MINUS
Captain U. S. Army
Commandant.

ALEXANDER MAY REDFERN, B. S., M. D.
Surgeon.

AUGUSTUS SHANKIN
Registrar and Secretary of Faculty.

PAUL HAMILTON EARLE SLOAN, M. D.
Treasurer and Secretary Board of Trustees

HUGH MILTON STACKHOUSE
Secretary Board of Fertilizer Control.

BEN CURRTIS HARD*
Bookkeeper.

WILLIAM CALVIN TUCKER†
Bookkeeper.

MISS KATHERINE BOCQUET TRECOT
Librarian.

MISS MINNIE BATES WANNAMAKER
Secretary to the President, and Registrar.

MISS HELEN C. BRADFORD
Stenographer to Agricultural Department.

MISS MARGARET L. SADDLER
Stenographer to Mechanical Department.

JOHN NATHAN HOOK
Justice Clemson College Corporation.

JAMES PERCIVAL LEWIS
Superintendent of College Farm.

AUGUST SCHILLETTER
Steward.

J. P. FEHAN‡
Assistant to Commandant.

J. M. GASQUE**
Assistant to Commandant.

J. S. GOODMAN
In Charge of Construction and Repairs.

Board of Health

President MELL, Doctors REDFERN and SLOAN, Professors
HARDIN and HARPER.

*Died March 8, 1908.
‡Resigned.

†In place of Mr. Hard.
**In place of Mr. Fehan.

Experiment Station Council

P. H. MELL, PH. D., LL. D., President of College.
J. N. HARPER, B. S., M. Agr., Director Agriculture.
M. B. HARDIN, Chief Chemist.
C. C. NEWMAN, Horticulture.
A. F. CONRADI, M. S., Entomology and Zoology.
M. R. POWERS, D. V. S., Veterinary Science.
D. O. NOURSE, B. S., Animal Husbandry and Dairy.
C. L. NEWMAN, M. S., Agriculture.
F. H. H. CALHOUN, PH. D., Geology.
H. W. BARRE, B. Sc., Botany and Bacteriology.
F. S. SHIVER, PH. G., Chemistry.
R. N. BRACKETT, PH. D., Chemistry.

Assistants

J. N. HOOK, Secretary and Librarian.
D. H. HENRY, B. S., Chemistry.
J. M. BURGESS, B. S., Herdsman.
W. D. GARRISON, B. S., Foreman of Station Farm.
MISS HELEN C. BRADFORD, Stenographer.

Chemists of Fertilizer Control

B. F. ROBERTSON, B. S., Chemistry.
J. H. MITCHELL, M. S., Assistant, Chemistry.
T. E. KEITT, B. S., Assistant, Chemistry.
C. V. W. CORNELL, B. S., Assistant, Chemistry.

State Control Officers*

PROF. M. B. HARDIN, State Chemist.
PROF. C. E. CHAMBLISS, State Entomologist.
DR. M. RAY POWERS, State Veterinarian.

*Appointed by the Board of Trustees under the State laws requiring them to carry on the work indicated.

Ministers for Session 1907-1908

- Sept. 15. Rev. A. C. Hart, Mobile, Ala.
Sept. 22. Rev. J. S. Beasley, Anderson, S. C.
Sept. 29. Rev. J. S. Moffatt, Due West, S. C.
Oct. 6. Rev. C. E. Burts, Edgefield, S. C.
Oct. 13. Rev. O. T. Porcher, Greenwood, S. C.
Oct. 20. Rev. J. E. James, Anderson, S. C.
Oct. 27. Rev. George T. Harmon, Sr., Williamston, S. C.
Nov. 3. Rev. L. M. Roper, Spartanburg, S. C.
Nov. 10. Rev. Harold Thomas, Florence, S. C.
Nov. 17. Rev. E. P. Davis, Greenville, S. C.
Nov. 24. Rev. Watson B. Duncan, Rock Hill, S. C.
Dec. 1. Rev. W. T. Derieux, Greenville, S. C.
Dec. 8. Rev. W. B. Gordon, Camden, S. C.
Dec. 15. Rev. W. H. Mills, Clemson College, S. C.
Jan. 5. Rev. W. M. Steele, Greenville, S. C.
Jan. 12. Rev. T. T. Walsh, Columbia, S. C.
Jan. 19. Rev. T. P. Burgess, Edgefield, S. C.
Jan. 26. Rev. D. E. Camack, Saluda, S. C.
Feb. 2. Rev. W. M. Jones, Williston, S. C.
Feb. 9. Rt. Rev. William A. Guerry, Charleston, S. C.
Feb. 16. Rev. A. L. Phillips, Richmond, Va.
Feb. 23. Rev. S. R. Belk, Atlanta, Ga.
Mar. 1. Rev. E. M. Lightfoot, Orangeburg, S. C.
Mar. 8. Rev. S. Cary Beckwith, Charleston, S. C.
Mar. 15. Rev. E. E. Gillespie, Yorkville, S. C.
Mar. 22. Rev. C. C. Herbert, Camden, S. C.
Mar. 29. Rev. W. H. Greever, Columbia, S. C.
April 5. Rev. O. O. Fletcher, Greenville, S. C.
April 12. Rev. Richard Wilkinson, Augusta, Ga.
April 19. Rev. W. A. Hafner, Bowling Green, S. C.
April 26. Rev. William Way, Charleston, S. C.
May 3. Rev. E. M. Poteat, Greenville, S. C.
May 10. Rev. K. G. Finlay, Columbia, S. C.
May 17. Rev. J. Keir G. Fraser, Charleston, S. C.
May 24. Rev. A. N. Brunson, Columbia, S. C.
May 31. Rev. C. A. Freed, Columbia, S. C.
June 7. Baccalaureate Sermon—Rev. Carter Helm Jones, Lynchburg, Va.

REGIMENTAL ORGANIZATION

MARCH 16, 1908.

*Commandant of Cadets*CAPTAIN JOSIAH C. MINUS,
Sixteenth Infantry, United States Army.*Regimental Staff*

D. L. Tindal.....	Captain and Adjutant
F. P. Caughman.....	Captain and Quartermaster
L. G. Richardson.....	First Lieutenant and Assistant Quartermaster

Non-Commissioned Staff

L. C. Boone.....	Sergeant-Major
A. L. Harris.....	Quartermaster Sergeant
J. B. Simpson.....	Color Sergeant
J. N. McLaurin.....	Color Sergeant

First Battalion

MAJOR C. A. McLENDON

A. T. Beaver.....	Adjutant
W. L. Nance.....	Sergeant-Major

COMPAY "A"	COMPANY "B"	COMPANY "C"	COMPANY "D"
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Captains

Kennedy, A. G.	Harris, D. N.	Pratt, W. O.	Alverson, J. E.
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Lieutenants

Rumff, W. H.	Spratt, J.	McCaslin, C.	Riser, H. B.
Hutchins, E. L.	Truluck, G. M.	Crider, F. J.	Gee, W. P.

First Sergeants

Brice, T. L.	Clark, O. M.	Blair, J. R.	Wolff, B. E.
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Sergeants

Byars, L. P.	Folk, J. T.	Whittle, A. C.	Reaves, T. B.
McLaurin, K.	Spratt, W. C.	Burton, G. A.	Brockington, W. J.
McMillan, J. P.		Gandy, F. L.	Allen, T. S.
Jeter, R. P.		Clark, W. C.	Green, H. H.

Corporals

Spears, F. E.	Marion, T. L.	Henderson, R. P.	Leland, A. W.
Morrison, F. W.	Walters, O. L.	McKeown, A. A.	Baker, F. R.
Trott, C. H.	Crawford, B. L.	Lipscomb, P. H.	Evans, C. D.
Friday, W. A.	Barnett, W. A.	Simpson, R. M.	Head, N. O.

Second Battalion

MAJOR J. C. LITTLEJOHN

J. M. Bryan.....Adjutant
 W. D. Simpson.....Sergeant-Major

COMPANY "E" COMPANY "F" COMPANY "G" COMPANY "H"

Captains

Watson, L. O. Sandifer, M. L. Lunn, W. M. Heyward, T. C.

Lieutenants

Poag, R. O. Philips, J. A. Summers, A. C. Rosborough, W. M.
 Stevenson, C. L. Cannon, C. L. Thomas, W. A. Lewis, J. W.

First Sergeants

Dominick, W. G. Gary, E. E. McIver, H. W. Pegues, S. O.

Sergeants

Hyrne, W. G. Pridmore, J. C. Kelley, S. A. Dove, J. L.
 Sanders, H. K. Graham, J. O. Yeargin, L. H. Baldwin, C. E.
 Fulmer, T. Green, F. B. Brandon, L. B. Colman, L. A.
 Dick, R. C. Grier, A. Blake, R. E. Barnett, G. M.

Corporals

Marshall, W. J. Lachicotte, G. E. Salley, T. R. Easterling, K.
 Morgan, W. H. White, W. Keith, J. B. Stevenson, J. S.
 Albergotti, W. M. Harvin, W. S. Summers, L. W. Allen, W.
 Milling, J. C. Cooper, H. P. Salley, G. L. Martin, H. H.

Detachment "I"

S. H. Sherard.....Lieutenant
 H. C. Twiggs.....First Sergeant

Sergeants

Clement, E. D. Tarbox, F. G.

Corporals

Reaves, H. L. Gardner, G. D.

Cadet Band

E. P. Crouch.....	<i>First Lieutenant and Chief Musician</i>
J. M. Wylie.....	<i>Drum Major</i>
R. S. Wolfe.....	<i>Solo E b Clarinet</i>
G. E. Lomax.....	<i>First B b Clarinet</i>
W. K. Tavel.....	<i>Solo B b Cornet</i>
A. McDavid.....	<i>Solo B b Cornet</i>
V. B. Higgins.....	<i>First B b Cornet</i>
E. P. Porcher.....	<i>Second B b Cornet</i>
T. D. Williams.....	<i>Third B b Cornet</i>
C. M. Trott.....	<i>Solo E b Alto</i>
E. H. Pinckney.....	<i>First E b Alto</i>
J. M. Wylie.....	<i>Second E b Alto</i>
L. D. Webb.....	<i>First Trombone</i>
C. T. Latimer.....	<i>First Tenor</i>
E. P. Crouch.....	<i>Baritone</i>
E. B. Plenge.....	<i>First E b Bass</i>
E. A. McCreary.....	<i>Second E b Bass</i>
J. D. Graham.....	<i>Snare Drum</i>
J. P. Lewis.....	<i>Bass Drum</i>
D. L. Bissell.....	<i>Cymbals</i>

LOCATION AND HISTORICAL SKETCH
ADMISSION AND COURSES OF STUDY

Location

The College is located on the old Fort Hill homestead of Johi C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is also connected by local telephone with neighboring towns in adjoining counties, and by telegraph and long distance telephone with all parts of the country. The postoffice is conveniently situated on the campus, and receives five daily mails.

Historical Sketch

The College is the outcome of a movement for the establishment of an Agricultural College by a convention of farmers of the State in 1886. The first step toward the realization of this project was taken by the Hon. Thomas G. Clemson, who, upon his death in 1888, bequeathed to the State the old Fort Hill homestead, the former home of John C. Calhoun, and other securities to the value of \$58,539, "for the establishment of an Agricultural College." The estate included about eight hundred acres of land and the historic old Calhoun residence, which is now carefully pre-

served on the College campus. This bequest was accepted by the State Legislature in an Act which became a law in November, 1889.

The College was opened on the 6th day of July, 1893, and 446 students were enrolled during the first session. These were classified as sophomores, freshmen, and higher and lower preparatory. The Trustees having decided that sessions should begin on the third Thursday in February and end on the third Thursday in December, the first session was only about five and a half months long. On this account the students were continued in the same classes throughout the second session,—February to December, 1894,—and the enrollment increased to 635. On the night of May 22, 1894, the main building was burned, but the regular exercises were not interrupted, and the only summer vacation consisted of a week's encampment at Spartanburg in July.

During the third session, February to December, 1895, there were 370 students in attendance, with the former sophomores advanced to the junior class. There was a recess of two weeks in the latter part of July, and the session was closed on December 7th. The enrollment during the fourth session, February to December, 1896, was 350, and the first commencement exercises were held on December 13 to 16, 1896, with a graduating class of 37, 15 in the agricultural course and 22 in the mechanical-electrical. The fifth session opened in the regular way, on the third Thursday in February, 1897. At a meeting of the Trustees in July, it was decided to open the College on the 14th of September, and that henceforth the sessions should begin regularly on the second Wednesday in September and close on the second Wednesday in June. The exercises of the

second commencement, which would normally have occurred in December, 1897, were held on February 6 to 9, 1908. The graduating class numbered 25, 13 in the agricultural course and 12 in the mechanical-electrical. The undergraduate classes were continued until June, and the total enrollment for this long session (February, 1897, to June, 1898) was 449. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, although the closing day was afterward changed to first Tuesday, instead of second Wednesday. During the sixth session, 1898-1899, the enrollment was 446, and the graduating class numbered 16, 6 in the agricultural course, 6 in the mechanical-electrical, and 4 in the civil engineering. The textile department was first opened for students at the beginning of this session, in September, 1898. During the seventh session, 1899-1900, 461 students matriculated, and the class of 1900 numbered 28, including 12 in the agricultural course, 6 in the mechanical-electrical, 6 in the civil engineering, and 4 in the textile.

Beginning with the eighth session, 1900-1901, preparatory instruction was restricted to a one-year course, thus abolishing the lower preparatory class. During the session 483 students were enrolled, and the graduating class numbered 31, including 9 in the agricultural course, 11 in the mechanical-electrical, 2 in the civil engineering, and 9 in the textile. In the ninth session, 1901-1902, 500 students matriculated and 59 were graduated, including 12 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 17 in the textile. The enrollment

during the tenth session, 1902-1903, was 539, and the graduating class numbered 60, including 6 in the agricultural course, 28 in the mechanical-electrical, 5 in the civil engineering, and 21 in the textile.

In the eleventh session, 1903-1904, 605 students were enrolled, and the graduating class numbered 39, including 4 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 5 in the textile.

A gold medal was awarded to the mechanical, electrical, civil and textile exhibit at the St. Louis Exposition.

A bronze medal was awarded to the agricultural department for the preservation of the sweet potato.

In the twelfth session, 1904-1905, 673 students were enrolled, and the graduating class numbered 39, including 5 in the agricultural course, 20 in the mechanical-electrical, 8 in the civil, 5 in the textile, and 1 in the metallurgical course.

In the thirteenth session, 1905-1906, 652 students were enrolled, and the graduating class numbered 59, including 16 in the agricultural course, 20 in the mechanical-electrical, 15 in the civil, and 8 in the textile course.

In the fourteenth session, 1906-1907, 658 students were enrolled, and the graduating class numbered 69, including 28 in the agricultural course, 25 in the mechanical-electrical, 15 in the civil, and 1 in the textile course.

The total number of graduates to June, 1907, was 462.

Admission of Students

Every candidate for admission must be at least sixteen years of age.

Students desiring to enter the College should apply to the President for application blanks, and these, properly

filled out, should be returned to the President as early in the summer as possible, and in no case later than August 15th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College, subject to their passing the required examinations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases, including consumption.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class.

(b) As between applicants of equal preparation, the oldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other States may be admitted, and when so admitted, may continue in College until they complete their course.

(f) Applicants not entering within ten days after the

opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the President's office and matriculate before they will be assigned to quarters in the barracks. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of the fees. (See page 54.)

Matriculation is equivalent to a pledge to conform to the rules and regulations of the College.

Entrance Requirements

For admission into the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography, and history of the United States.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with the ordinary principles and operations of arithmetic. Wentworth's Practical Arithmetic is recommended as a suitable text-book.

Algebra.—The detailed requirements are as follows: Definitions and notation, fundamental operations, including laws of signs, and the interpretation of negative results; use of parentheses; factoring; highest common factor; lowest common multiple; single and complex fractions; simple integral and fractional equations with one unknown number, and problems leading to such equations; simultaneous equations of the first degree, with applications to solution of problems; involution of monomials, and polynomials; evolution of monomials and polynomials; theory of exponents with applications; radicals, including solution of equations involving rationalization; simple operations with imaginary expressions; pure and affected quadratic

equations containing one unknown number, with application to problems.

The student should cover carefully the whole ground here specified, and should acquire a clear understanding not only of algebraic processes, but of the principles and reasons involved in every operation. Students fail on entrance examinations more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book.

A satisfactory treatment of the topics in algebra may be found in Wentworth's New School Algebra (used in the public schools).

English.—Applicants are examined in spelling, sentence analysis, and oral reading; and are required to write short essays on an assigned subject.

Geography.—Applicants must possess a fair knowledge of general geography, such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography, or other standard text-book of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and positions of the continents, and locations of the principal mountains, plateaus, river basins, and coastal lowlands; influences of land forms and climate upon the life and industries of the inhabitants; locations and outlines of important countries, particularly those of America and Europe, and of the States in the United States; locations of great cities in all countries, and conditions favorable to the growth of cities.

History.—A School History of the United States, by White, is the text-book recommended. Any other school history may be used in place of the one named.

Entrance Examinations

Entrance Examinations are held during the first week of the opening of the session, September 9 to 14, 1908, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules, beginning at 9 a. m.:

FOR ADMISSION TO THE FRESHMAN CLASS.

Arithmetic—Wednesday, September 9, 1908.

Algebra—Thursday, September 10, 1908.

English—Friday, September 11, 1908.

Geography—Saturday, September 12, 1908.

History—Monday, September 14, 1908.

FOR ADMISSION TO THE PREPARATORY CLASS.

Arithmetic—Wednesday, September 9, 1908.

English—Thursday, September 10, 1908.

Geography—Friday, September 11, 1908.

Upon passing satisfactorily the required examinations, the Committee on Examinations furnishes the applicant with a certificate to that effect, and upon presentation of this certificate at the President's office he is assigned to the class recommended by the Committee.

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled on the following pages. Such applicants should report with other new students during the regular examination period, and arrange with their instructors for the

necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

Examinations for admission into the beneficiary scholarships established at the recent session of the Legislature are held by the various county boards of education, and can not be given at the College. For further particulars in regard to these scholarships, see page 56.

Prescribed Courses of Study

As briefly described and tabulated on the following pages, six regular four-year courses are offered, each leading to graduation with the degree of Bachelor of Science (B. S.), the course pursued being designated on the diploma.

The two agricultural courses are alike in the freshman year, and agricultural students are, therefore, required to choose between these at the beginning of the sophomore year. The other four courses are alike during the first two years, and choice between them is made at the beginning of the junior year. The descriptions accompanying the detailed schedules of studies in the various courses are intended to aid the student in arriving at an adequate estimate of the scope and purpose of each course, in order that he may the more intelligently choose between them.

In all the courses, two hours of practical work in shop, laboratory, or field, are regarded as equivalent to one hour of "theoretical" work, or recitations, as no outside preparation is required for practical work, and the exercises are completed in the periods assigned in the curriculum.

Change from one course to another is not permitted except upon approval of the Faculty. Any student desiring to change his course of study must submit a written application to the President for such change within thirty days from the date of his matriculation for the current session.

When change is made at beginning of sophomore year, from one of the engineering courses to the agricultural course or from the agricultural to one of the engineering courses, the student is required to make up the equivalent of three practical hours per week for a year in whatever subject the director of the department shall specify.

COURSE I. AGRICULTURE

This is a broad educational course, covering the whole field of natural sciences that are tributary to the agricultural industry, together with a liberal amount of mathematics, English, physics, history and political economy, and a maximum amount of chemistry.

The division of the original course into (1) Agriculture and Horticulture, (1a) Agriculture and Chemistry, and (2) Agriculture and Animal Industry, described on the following page, has been made in order to afford opportunity for election in these lines. In this course the student is given more special training in agriculture, horticulture, chemistry, botany, bacteriology, and entomology; and thus is laid a foundation upon which he may readily specialize in any of these branches after graduation. The student is well equipped to take up farming, gardening, or fruit-growing as an occupation, or for the pursuit of investigational work in the United States Department of Agriculture or the various State experiment stations.

Each of the agricultural courses forms an excellent foundation for the study of other professions, particularly that of medicine.

COURSE I. AGRICULTURE

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term.	Third Term.		First Term.	Second Term.	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (261).....	3	3	1
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (233)....	3	3	3
Agriculture (100).....	2	1	1	Entomology (140).....	3	1	3
Botany (171).....	1	2	2	Botany (171).....	1	3	3
				Forge Work (242).....	1	1	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522).....	5	1	1	Chemical Laboratory (301)....	3	2	2
English (502).....	3	3	3	Surveying (Field) (530).....	1	2	2
Chemistry (300).....	3	3	3	Botany (172, 173).....	1	2	3
Physics (220).....	2	2	2	Entomology (140).....	2	1	1
Surveying (530).....	1	2	2	Forestry (174).....	3	1	1
Botany (172).....	1	1	1	Live Stock (154).....	1	2	2
Live Stock (152, 153).....	2	2	2	Physiology (131).....	1	1	3
Veterinary Science (130).....	1	1	2	Veterinary Science (130).....	2	2	1
Zoology (141).....	1	2	1	Zoology (141).....	2	2	1
				Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Rural Engineering (534).....	2	1	1
German (540).....	2	2	2	Chemical Laboratory (303)....	4	4	4
History (513, 514).....	2	2	2	Zoological Lab. (141).....	1	5	1
Chemistry (302).....	2	2	2	Botanical Laboratory (173)...	1	1	3
Rural Engineering (534).....	2	1	1	Agriculture (102, 104).....	3	1	2
Zoology (141).....	1	2	1	Horticulture (121).....	1	3	3
Agriculture (104).....	1	1	4	Dairying (162).....	3	1	1
Horticulture (121).....	2	2	2	Military Drill (602).....	3	3	3
Dairying (161).....	2	2	1				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	1	2*	3	Chemical Laboratory (305) ...	4	4	4
German (541).....	2	2	2	Entomological Lab. (142).....	2	2	2
Political Economy (515)....	3	2*	1	Forestry (174).....	4	1	1
Chemistry (304).....	2	2	2	Bacteriological Lab. (175)....	2	2	4
Geology (112).....	2	3	1	Agriculture (106, 107).....	1	2	2
Entomology (142).....	1	3	2	Horticulture (122).....	2	1	1
Bacteriology (175).....	1	1	2	Mineralogy (117).....	1	2	1
Agriculture (105, 106).....	2	2	2	Military Drill (602).....	3	3	3
Stock Feeding (156).....	3	1	1				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE I a. AGRICULTURE AND CHEMISTRY

This is a differentiation of the original course in Agriculture for the purpose of affording students specially interested in chemistry, mineralogy and bacteriology an opportunity to receive more instruction in these subjects than is offered by the other agricultural courses. There is a growing demand for well-trained chemists, and the students who propose to select the profession of chemistry will find that this course is well arranged to give them a good foundation in the science and at the same time furnish them a liberal education.

COURSE I A. AGRICULTURE AND CHEMISTRY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term..	Second Term	Third Term.		First Term..	Second Term	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521)	5	5	5	Woodwork (261).....	3	3	-
English (501).....	5	5	5	Freehand Drawing (230)	3	3	3
History (511, 512)	3	3	3	Mechanical Drawing (233) ..	3	3	3
Agriculture (100).....	2	-	-	Entomology (140).....	3	-	-
Botany (171)	-	2	2	Botany (171)	-	3	3
				Forge Work (242)	-	-	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522).....	5	-	-	Chemical Laboratory (301) ...	3	2	2
English (502)	3	3	3	Surveying Field (530)	-	2	2
Chemistry (300)	3	3	3	Botany (172, 173).....	-	2	3
Physics (220).....	2	2	2	Entomology (140)	2	-	-
Surveying (530).....	-	2	2	Forestry (174).....	3	-	-
Botany (172)	-	1	1	Live Stock (154)	-	2	2
Live Stock (152, 153).....	2	2	2	Physiology (131)	-	-	3
Veterinary Science (130).....	-	-	2	Veterinary Science (130)....	2	2	-
Zoology (141).....	-	2	-	Zoology (141)	2	2	-
				Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Mineralogy (111).....	2	2	2
German (540).....	2	2	2	Rural Engineering (534).....	2	2	-
History (513, 514)	2	2	2	Chemical Laboratory (303)...	6	6	6
Chemistry (302)	2	2	2	Agriculture (103, 104).....	2	-	2
Rural Engineering (534).....	2	2	-	Horticulture (121).....	-	2	2
Mineralogy (111).....	2	2	2	Military Drill (602).....	3	3	3
Agriculture (104).....	-	-	4				
Horticulture (121).....	2	2	-				
Military Science (600).....	1	1	1				

Senior Class

English (504)	-	2*	3	Chemical Laboratory (305) ...	6	6	6
German (541).....	2	2	2	Forestry (174).....	4	-	-
Political Economy (515).....	3	2*	-	Bacteriological Lab. (175)....	-	2	4
Chemistry (304)	2	2	2	Mineralogy (117)	2	2	2
Geology (112).....	2	3	1	Horticulture (122).....	-	2	-
Forestry (174).....	2	-	-	Military Drill (602).....	3	3	3
Bacteriology (175)	1	3	4				
Agriculture (105, 106).....	2	2	2				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY

This is a differentiation of the original Course in Agriculture for the purpose of affording students specially interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential, studies have been omitted; but mathematics is retained through the second year, and a special course in rural engineering put in the third year. English, history and civics are retained throughout the course, drawing the first year, physics the second year, geology the last year, and chemistry the last three years, but slightly reduced and changed to meet the demands of this new course. Botany, bacteriology, zoölogy and entomology are so planned as to begin the first year of the course and thereby contribute to clearer knowledge of farm crops, live stock, dairying, sanitation and animal diseases. General agriculture is taught during the first two years, horticulture the third and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breeds of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding, care and management of flocks and herds. In the dairy course are taken up the production, handling, manufacture and marketing of whole milk, cream, ice-cream, butter and cheese.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term.	Third Term.		First Term.	Second Term.	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (261).....	3	3	-
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (233).....	3	3	3
Agriculture (100).....	2	-	-	Entomology (140).....	3	-	-
Botany (171).....	-	2	2	Botany (171).....	-	3	3
				Forge Work (242).....	-	-	3
				Military Drill (602).....	3	3	3

Sophomore Class

Mathematics (522).....	5	-	-	Chemical Laboratory (301)...	3	2	2
English (502).....	3	3	3	Surveying Field (530).....	-	2	2
Chemistry (300).....	3	3	3	Botany (172, 173).....	-	2	3
Physics (220).....	2	2	2	Entomology (140).....	2	-	-
Surveying (530).....	-	2	2	Forestry (174).....	3	-	-
Botany (172).....	-	1	1	Live Stock (154).....	-	2	2
Live Stock (152, 153).....	2	2	2	Physiology (131).....	-	-	3
Veterinary Science (130).....	-	-	2	Veterinary Science (130).....	2	2	-
Zoology (141).....	-	2	-	Zoology (141).....	2	2	-
				Military Drill (602).....	3	3	3

Junior Class

English (453).....	2	2	2	Chemical Laboratory (303)...	4	4	4
German (540).....	2	2	2	Zoological Lab (141).....	-	-	4
History (513, 514).....	2	2	2	Horticulture (120, 121) ..	2	2	2
Chemistry (302).....	2	2	2	Dairying (163).....	3	4	-
Zoology (141).....	-	-	4	Veterinary Science (132, 133)...	-	2	2
Horticulture (120, 121).....	2	2	-	Agriculture (102).....	3	-	-
Dairying (161).....	2	2	-	Military Drill (602).....	3	3	3
Veterinary Science (131).....	2	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	-	2*	3	Chemical Laboratory (305)...	3	3	3
German (541).....	2	2	2	Entomological Lab. (142) ..	3	3	-
Political Economy (515).....	3	2*	-	Bacteriological Lab. (175).....	-	2	4
Chemistry (304).....	2	2	2	Live Stock (159).....	3	3	-
Geology (112).....	2	3	1	Veterinary Science (137).....	3	3	3
Bacteriology (175).....	-	-	2	Military Drill (602).....	3	3	3
Stock Feeding (157, 158, 160)...	2	2	2				
Veterinary Science (134, 135, 136)	3	3	2				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE III. CHEMISTRY AND GEOLOGY

This course is intended to equip the student for engaging in manufacturing operations involving metallurgy or other branches of inorganic chemistry, or for employment as assayer or chemist in connection with mining operations. It also furnishes a basis upon which he may readily specialize in mining or geology, with a view to conducting actual mining enterprises or to employment in responsible positions on state or national surveys.

The student is well grounded in the principles of chemistry, physics, mechanics, geology and mineralogy, but the principal stress is laid on geology and metallurgical chemistry. He also acquires valuable practical knowledge of surveying, mechanical engineering, foundry practice, drawing and designing, in addition to the pursuit of courses in English, history, political economy, and other subjects of general educational value.

The first two years of the course are the same as in the engineering courses. The third and fourth years differ chiefly in the substitution of advanced work in chemistry and metallurgy and in geology and mineralogy for the higher mathematics and technical engineering work.

For further particulars see the detailed descriptions of subjects tabulated on the opposite page.

COURSE III. CHEMISTRY AND GEOLOGY

(Numbers in parentheses refer to descriptions beginning on page 89)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term	Third Term.		First Term.	Second Term	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521).....	5	5	5	Woodwork (260).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (230).....	3	3	3
History (511, 512).....	3	3	3	Mechanical Drawing (232).....	3	3	3
Agriculture (101).....	2	2	2	Forge Work (240).....	3	3	3
				Military Drill (602).....	3	3	

Sophomore Class

Mathematics (522-4-5).....	5	3	3	Foundry (241).....	2	3	3
English (502).....	3	3	3	Pattern Making (262).....	2	3	3
History (513, 514).....	2	2	2	Mechanical Drawing (234).....	2	2	2
Chemistry (300).....	3	3	3	Chemical Laboratory (301)...	3	2	2
Physics (220).....	2	2	2	Descriptive Geometry (523)...	3	-	-
Surveying (530).....	-	2	2	Surveying Field (530).....	-	2	2
				Military Drill (602).....	3	3	3

Junior Class

English (503).....	2	2	2	Assaying (303).....	2	2	2
Chemistry (302).....	2	2	2	Chemical Laboratory (303)...	4	4	4
Mineralogy (111).....	2	2	2	Mineralogical Lab. (111).....	2	2	2
Geology (113).....	4	4	4	Mechanical Drawing (237)....	2	2	2
Physics (221).....	2	2	2	Physical Laboratory (222).....	2	2	2
Mechanism (210).....	2	-	-	Military Drill (602).....	3	3	3
Mechanics (211).....	-	2	2				
Military Science (600).....	1	1	1				

Senior Class

English (504).....	-	2*	3	Chemical and Metallurgical Laboratory (311).....	6	6	6
Political Economy (515).....	3	2*	-	Practical Geology (116).....	3	3	3
Chemistry (306).....	2	2	2	Mechanical Laboratory (215)...	3	3	3
Metallurgy (310).....	2	2	3	Military Drill (602).....	3	3	3
Economic Geology (115).....	2	3	4				
Petrography (114).....	2	2	2				
Mechanical Engineering (213)	3	3	-				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE IV. MECHANICAL AND ELECTRICAL ENGINEERING

This course is designed to fit young men for responsible positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually soon distances his uneducated competitors in the acquirement of practical knowledge and experience.

While devoting considerable time to purely technical work, it is recognized that to obtain the best ultimate result, the student should be given a thorough training in the English language and as broad and liberal a culture as the time available and his previous preparation will permit. Seeking in some degree to attain this end, such studies as history, English literature, civics, economics, geology and botany are taught in the course, as well as the partly technical sciences, mathematics, physics, and chemistry.

Within the department are taught physics, mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in laboratories equipped with the best modern apparatus.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but rather men capable of directing enterprises into which these trades enter as component parts, and to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the

course, including instruction in freehand drawing in the first year, mechanical drawing during the first three years, and machine design in the fourth year.

Graduates from this course are filling responsible positions in various lines of mechanical and electrical engineering and in drawing.

COURSE IV. MECHANICAL AND ELECTRICAL ENGINEERING

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term.	Third Term.		First Term.	Second Term.	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521)	5	5	5	Woodwork (260)	3	3	3
English (501)	5	5	5	Freehand Drawing (230)	3	3	3
History (511, 512)	3	3	3	Mechanical Drawing (232)	3	3	3
Agriculture (101)	2	2	2	Forge Work (240)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (241)	2	3	3
English (502)	3	3	3	Pattern Making (262)	2	3	3
History (513, 514)	2	2	2	Mechanical Drawing (234)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (220)	2	2	2	Descriptive Geometry (523)	3	-	-
Surveying (530)	-	2	2	Surveying Field (530)	-	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (235)	3	3	3
English (503)	2	2	2	Machine Shop (250)	3	3	3
Physics (221)	2	2	2	Physical Laboratory (222)	3	3	3
Electrical Engineering (200) ..	3	3	3	Electrical Laboratory (201)	3	3	3
Mechanism (210)	2	-	-	Military Drill (602)	3	3	3
Mechanics (211)	-	2	2				
Military Science (600)	1	1	1				

Senior Class

English (504)	-	2*	3	Machine Shop (251)	3	3	3
Political Economy (515)	3	2*	-	Machine Design (238)	3	3	3
Electrical Engineering (202) ..	5	5	5	Electrical Lab. (203)	3	3	1
Mechanical Engineering (213) ..	3	3	5	Mechanical Laboratory (214)	3	3	3
Mechanics (212)	2	2	-	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

COURSE V. CIVIL ENGINEERING

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics and the physical sciences. The course will also be found to embrace the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

For fuller details, see descriptions of instruction in these subjects.

COURSE V. CIVIL ENGINEERING

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term	Third Term.		First Term.	Second Term	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521)	5	5	5	Woodwork (260)	3	3	3
English (501)	5	5	5	Freehand Drawing (230)	3	3	3
History (511, 512)	3	3	3	Mechanical Drawing (232)	3	3	3
Agriculture (101)	2	2	2	Forge Work (240)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (241)	2	3	3
English (502)	3	3	3	Pattern Making (262)	2	3	3
History (513, 514)	2	2	2	Mechanical Drawing (234a)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (220)	2	2	2	Descriptive Geometry (523)	3	1	1
Surveying (530)	1	2	2	Surveying Field (530)	1	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (236)	3	3	3
English (503)	2	2	2	Machine Shop (250)	3	3	3
Physics (221)	2	2	2	Physical Laboratory (222)	2	2	1
Civil Engineering (531-3)	3	3	3	Civil Eng. Field (531-3)	4	4	3
Mechanism (210)	2	1	1	Mineralogical Lab. (110)	1	1	3
Mechanics (211)	1	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

English (504)	1	2*	3	Mechanical Drawing (239)	3	3	3
Political Economy (515)	3	2*	1	Mechanical Laboratory (214)	3	3	3
Civil Engineering (535-7)	5	5	5	Civil Eng. Field (535-7)	6	6	6
Mechanical Engineering (213)	3	3	5	Military Drill (602)	3	3	3
Mechanics (212)	2	2	1				
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

*Political Economy ends and Senoir English begins at the middle of the second term.

COURSE VI. TEXTILE INDUSTRY.

This department was established primarily to direct young men in their study of the textile fibres, to teach their manipulation, and the after processes of manufacture required by the trade.

The principles underlying the art of manufacture are taught by lecture, text-book and experiment; skill is acquired by intimate contact with the machinery equipment, which consists of various types of machines designed by the prominent builders of cotton machinery in this country.

The aim has been to arrange a course in which the student will be allowed the opportunity of acquiring a good general education along with this special training in textiles. For this reason, in order to allow time to be devoted to culture studies, and to instruction in the general principles of the sciences involved in manufacture, the course does not follow special lines closely until the junior year.

During the junior and senior years, in which more time is devoted to textile subjects, the student is brought face to face with facts and conditions, from the proper observation and study of which he may obtain information and experience that would take him years to acquire in the mills.

This course does not presume to fit one for the management of a mill, but is intended to give the student a broad foundation on which to specialize, and the graduate is in possession of such information, and has acquired such experience and knowledge in handling raw materials and manufacturing machinery as, if supplemented by energy, application and tact, will soon lead to rapid advancement in the special line of work taken up.

COURSE VI. TEXTILE INDUSTRY.

(Numbers in parentheses refer to descriptions beginning on page 89.)

Freshman Class

	Hours per week				Hours per week		
	First Term.	Second Term	Third Term.		First Term.	Second Term	Third Term.
THEORETICAL				PRACTICAL			
Mathematics (520, 521)	3	3	5	Woodwork (260)	3	3	3
English (501) ..	3	3	5	Freehand Drawing (230)	3	3	3
History (511, 512)	3	3	3	Mechanical Drawing (232)	3	3	3
Agriculture (101)	2	2	2	Forge Work (240)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (241)	2	3	3
English (502)	3	3	3	Pattern Making (262)	2	3	3
History (513, 514)	2	2	2	Mechanical Drawing (234)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (220)	2	2	2	Descriptive Geometry (523)	3	-	-
Surveying (530)	-	2	2	Surveying Field (530)	-	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Machine Shop (250)	3	3	3
English (503)	2	2	2	Chemical Laboratory (303, 420)	3	3	3
German (540)	2	2	2	Weaving (410, 411)	3	3	3
Textile Chemistry (420)	1	1	1	Carding and Spinning (400, 406)	3	3	3
Designing (412)	1	1	1	Military Drill (602)	3	3	3
Carding and Spinning (400, 406)	1	1	1				
Mechanism (210)	2	-	-				
Mechanics (211)	-	2	2				
Military Science (600)	1	1	1				

Senior Class

English (504)	-	2*	3	Mechanical Laboratory (215)	-	3	3
German (541)	2	2	2	Cam Drawing (239a)	2	-	-
Political Economy (515)	3	2*	-	Carding and Spinning (407, 409)	3	2	3
Mechanical Engineering (213)	3	3	-	Dyeing (421)	4	4	3
Carding and Spinning (407, 409)	2	2	2	Weaving (410, 411)	4	4	4
Textile Chemistry (421)	1	1	1	Military Drill (602)	3	3	3
Designing (412)	2	2	2				
Cloth Analysis (414)	-	1	1				
Jacquard Designing (413)	-	-	2				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at the middle of the second term.

Special Courses

Besides students in the usual undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of the course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of the uniform and board in barracks.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical. No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on elementary mechanical drawing, physics and chemistry, and on mathematics, through plane

trigonometry. They will be expected to take with the *junior class*, in addition to their electrical studies, physics, mechanics, mathematics, mechanical drawing and machine shop work. Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the *senior class*, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing and machine design.

Students who are not prepared, or are not willing to take the other subjects necessary to successful study of electrical engineering, will not be permitted to take a special course in this line.

Special Textile Course

To meet the demands of Southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course, as scheduled and described on the preceding pages.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, and is thoroughly practical and allows a greater portion of the student's time to be devoted to the pursuit of textiles in its several branches.

To pursue this course successfully the student must be well grounded in arithmetic, and should be capable of

expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 9 to 14, 1908, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. They will not be required to perform military duty, but will be subject to the general rules and regulations of the College. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

Special Cotton Grading Course

This course begins with the winter term, January 4, 1909, and continues for six weeks. All of the important cottons of the world are studied, but most of the practice is with the various varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. These students are given the results of experiments made by the textile students with the various grades.

Instruction is also given by notes and text-book. Elementary bookkeeping and warehouse accounting is included in this course.

Text-books: Dabney's The Cotton Plant; C. P. Brooks' Cotton.

COURSE OF STUDY.

FIRST YEAR.	Hours Per Week. 1st Term.	Hours Per Week. 2d Term.	Hours Per Week. 3d Term.
Mathematics (begin Algebra)	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory) . . .	2	2	2
Carding and Spinning (practical) .	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Freehand Drawing	3	3	3
	—	—	—
	30	30	30
SECOND YEAR.			
Mathematics (complete Geom- etry)	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory) . . .	2	2	2
Carding and Spinning (practical) .	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Designing	2	3	3
Weaving	5	8	8
	—	—	—
	30	30	30

Irregular Courses

Every student is required to pursue one of the regular courses, as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.

2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Courses

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home then he must stand his examination for one of the College classes, and failing to pass the required examination for the freshman class, will not be allowed to enter the preparatory class, but must return home.

The instruction in this department is under the immediate supervision of the professors of English, mathematics, history, and geology in the College, and is closely articulated with the work of the advanced classes.

The course of study is as follows:

Arithmetic, 5 hours a week.

Algebra, 5 hours a week.

Grammar and Composition, 5 hours a week.

Reading and Spelling, 5 hours a week.

Geography, 2 hours a week.

History, 3 hours a week.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course the next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Reports, Grades and Promotions

Reports of class-standing and discipline are sent to parents at intervals of approximately one month throughout the session. During 1908-1909 these reports will be made up for the periods ending on the following dates, and will usually be mailed to parents about one week later: October 23th and December 14th,* 1908; February 5th, March 12th,* April 23d and May 28th,* 1909. Dates

marked with the asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

The session is divided into three terms, ending December 23d, 1908, March 12th and June 6th, 1909, respectively. Examinations are held at the close of each term, and reports are sent to parents giving the results of these examinations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent., on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

No student is entitled to a second examination in any subject, except by special permission of the Faculty. In case of only one or two failures such permission is usually granted, provided the student's record indicates a reasonable degree of application to his studies.

Students whose conditions have not been removed by the opening of the next session will be required to take the work of the preceding year over, unless for special reasons an extension of time is allowed.

Students who are taking over the work of any year in a regular course, or who for any reason have been put back from a higher to a lower class, are required to take the full work of that class.

A student taking any subject over waives the right to all previous records in that subject, and is placed upon the same footing as students taking the work for the first time.

Parents will be advised to withdraw students who habitually shirk duties.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make first grade (90 per cent. or over) in all studies for any session are designated as *distinguished*, and their names are published in the Catalogue of the succeeding year.

Trustees' Medal.—The Board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1907 by B. D. Carter, '07.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won in 1907 by J. C. Littlejohn, Calhoun; B. D. Carter, Columbian; W. O. Pratt, Palmetto.

In oratory, by S. H. Sherard, Calhoun; W. B. Aull, Columbian; G. W. Speer, Palmetto.

In declamation, by T. C. Heyward, Calhoun; C. W. Wannamaker, Columbian; H. H. Brunson, Palmetto.

The Chronicle Medals.—*The Chronicle*, the monthly magazine published by the literary societies, also usually

awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

The Colors of Battalion are awarded at the close of each session to the best drilled battalion, and are carried by it during the succeeding session. In June, 1907, this distinction was won by the First Battalion, A. S. Heyward, Cadet Major.

A Blue Silk C. A. C. Flag is awarded June of each year to the best drilled company, and carried by it during the succeeding year. This was won in June, 1907, by Company B, A. E. Crawford, Captain.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1907 by Cadet D. L. Tindall, Class of '08.

Norris Medal—"I give \$500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engroved on it '*Honos habet onus*' (Honors bring responsibilities)."

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the *Official Army Register* of the succeeding year.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States army.

Second Lieutenancy United States Army.—General Orders, No. 39, War Department, contains the following paragraph:

“The reports of the regular inspections of the colleges and schools to which officers of the army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the general staff for its critical examination, and the chief of staff will report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in the regular army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men.”

The term “honor graduate” signifies any graduates who would rank as one of the first five of his class.

Fees and Expenses

The regular fees and charges for the session of 1908-1909 will be as follows:

Incidental fee	\$ 5 00
Medical fee	5 00
Uniform	*23 35
Khaki uniform	5 20
Board and washing	76 52
Breakage fee	3 00
Tuition	40 00
Total	\$158 07

*The price of uniform is subject to market fluctuations, and cadets often need a second pair of trousers.

These charges must be paid in quarterly installments as follows:

September 9, 1908.....	\$ 70 68
November 11, 1908.....	29 13
January 25, 1909.....	29 13
March 31, 1909.....	29 13

Remittances should be made in cash, or by money order or New York exchange—*not by local check*—to Dr. P. H. E. Sloan, Treasurer, Clemson College, S. C. Banks charge exchange on local checks.

A deduction will be made for board and washing only when a student is absent one month or more.

The breakage fee is a deposit to cover damage or destruction of College property, and any amount remaining to the credit of a student at the end of the session will be returned to him. Whenever College property is damaged the cost of repair is charged to the individual student, if the responsibility can be determined. Otherwise the cost is divided equally among all the students. Any student whose breakage account exceeds \$3.00 will be required to make another deposit.

A fee of \$1.50 is charged for diploma, payable before graduation.

The above charges do not include cost of books and stationery, which, however, may be obtained at the Cadet Exchange at wholesale prices.

Each student must provide himself with 4 sheets, 2 blankets, a comfort, 6 towels, 1 pillow, 2 pillow-cases, 1 mattress. Beds are single width. Mattresses will be kept by the College at wholesale prices.

Free Tuition

Section 1120, Revised Statutes of South Carolina, 1893, Volume I, setting forth the powers and duties of the Board of Trustees, contains the following provision:

“They shall charge each student a tuition fee of forty dollars per annum; . . . indigent students shall not be required to pay said tuition fee.”

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

For students receiving free tuition the quarterly charges will be \$10 less in each case than the amounts give above, namely:

September 9, 1908.....	\$ 60 68
November 11, 1908.....	19 13
January 25, 1909.....	19 13
March 31, 1909.....	19 13

The total charges for the year in such cases are only \$118.07.

Agricultural Scholarships

By an Act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and apportioned among the counties in the same manner as the members of the Senate and House of Representatives.

The law provides “That the said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of

such age as is fixed by the Board of Trustees of said College for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural and the textile courses: *Provided*, That not more than one scholarship from each county shall be open to the textile course."

Examination questions are to be prepared by the President and Faculty of the College and sent to the County Board of Education of each county on or before the 15th day of July in each year, with a statement of the number of vacant scholarships to which the county is entitled. The County Boards of Education shall hold the examinations by numbers, *i. e.*, by requiring each applicant to draw a number from a miscellaneous collection of numbers furnished by the County Board. Each applicant shall then seal his name in an envelope, which shall be kept sealed by County Boards of Education. The applicants shall then put their numbers and not their names on their papers. The papers shall be forwarded to the President of Clemson College and the members of the Faculty of that institution, who may be designated by the President, shall examine the papers and return the marks of the applicant to the County Boards of Education by the numbers as furnished to them. The County Boards of Education shall then open the envelopes containing the names and make recommendations as to the award of the scholarships to the State Board of Education.

Section 4 reads: "That before applying for said scholarships applicants shall make proof, under oath, to their

respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said board permission to stand such examination."

The law further provides that these scholarships "shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses."

NOTE.—Scholarship students will therefore have to deposit \$18.07 with the treasurer at the beginning of the session. This amount is approximate, depending on the price of the uniform.

Textile Scholarships for Two-Year Course

Victor Manufacturing Company Scholarship.—Established by Lewis W. Parker.

Williamantic Scholarship.—"In memory of W. E. Borrows, a friend of mill operatives." Open to any resident of the State in need of assistance, and who is recommended by his employer.

Metz Scholarship.—By H. A. Metz, of H. A. Metz & Co., New York.

Draper Scholarship.—By Draper Co., Hopedale, Mass. These scholarships are valued at \$50.

County Apportionment

The one hundred and sixty-five scholarships provided for in this institution by the Legislature are apportioned to the counties of the State according to law, as follows:

Abbeville	4	Greenwood	4
Aiken	5	Hampton	3
Anderson	6	Horry	3
Bamberg	3	Kershaw	3
Barnwell	4	Lancaster	3
Beaufort	4	Laurens	4
Berkeley	4	Lee	3
Calhoun		Lexington	4
Charleston	9	Marlboro	4
Cherokee	3	Marion	4
Chester	4	Newberry	4
Chesterfield	3	Oconee	3
Clarendon	4	Orangeburg	6
Colleton	4	Pickens	3
Darlington	4	Richland	5
Dorchester	2	Saluda	3
Edgefield	3	Sumter	4
Fairfield	4	Spartanburg	7
Florence	4	Union	3
Georgetown	3	Williamsburg	4
Greenville	6	York	5

GROUNDS, BUILDINGS AND EQUIPMENT

GROUND S AND BUILDINGS

Campus and Farm.—The College grounds occupy about 1,122 acres of land, including the campus, sites of buildings and residences, grounds for military drill and outdoor athletics, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 140 feet, trimmed with gray sandstone. It contains 22 rooms, including recitation rooms, library and reading room, literary society and Y. M. C. A. hall, physical laboratory, besides the offices of the President, the Commandant, the Treasurer and a reception room. Adjoining this building is Memorial Hall, the College chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building there is a tower clock. The building is provided with steam heat and electric lights.

The Cadet Barracks comprise three large brick buildings. One is three stories high and contains 147 rooms for students, a dining hall 134 by 44 feet, and a kitchen 50 by 37 feet. The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure spring water. The rooms in the barracks are furnished with single-width iron cots and other neces-

sary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

Gymnasium.—A large room in the basement of Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. During the past year this room was equipped with well-selected gymnasium apparatus. Among the apparatus are to be found a horizontal bar, parallel bar, springboard, traveling rings, flying rings, climbing rope, horse, low parallels, floor mats, and take-off board.

The object of the gymnasium is to give to those students interested in athletics training all the year round, so that they will constantly be in good condition for work on the athletic teams. It is also designed for those students who do not take other forms of exercise and depend upon the gymnasium for their only means of physical development. The work is not required, but is engaged in by a large number of students. A member of the Faculty superintends the work and directs the exercises.

Museum.—On the first floor of Agricultural Hall, the Museum of Natural History is located. During the past year the museum has been furnished with large cases and the collections of the geologist, entomologist and botanist have been installed.

New Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70 K. W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a three-wire 75 K. W. direct current generator.

A 75 K. W. rotary converter is used to convert from one kind of service to the other.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through three 25 K. W. transformers. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The plant complete cost about \$25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric light and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

The Hospital, located about a quarter of a mile from the Barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the Surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

The Laundry is a brick building specially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for students.

Agricultural Buildings

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings oölitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides classrooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoölogy and entomology, veterinary science, dairying and animal husbandry, geology and mineralogy, and offices for the Experiment Station. It also contains a room 40 by 60 feet, with a gallery, for a natural history museum, and a gymnasium hall of the same dimensions below.

The Horticultural Grounds embrace an area of thirty acres. Eight acres are devoted to apples for experiment purposes, six acres to peaches, two acres to grapes, two acres to pecans, one acre to plums, seven acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs and flowers.

The Greenhouse is 21 by 140 feet and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains three thousand large pot plants of various kinds and nine thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet. It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a dissecting room and a small room for hot-water plant, coal and general storage. On the first floor are rooms for office, instruments and medicines, toilet, horse-shoeing, harness closet, and an examining floor, operating table, soaking vat, three box-stalls and three tie-stalls. On the second floor are rooms for attendant, pharmacy, storage of grain, kennels and cages for small animals, and a haymow.

Convenient to this building is a shed 24 by 40 feet, enclosed on three sides, but well lighted, and it has a large hayloft. There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into three paddocks. In one of these is an open cattle-shed, 13 by 32 feet, and a chute, used in dehorning, inoculations, and other operations where a herd is to be handled.

The Dairy Building is a wooden structure constructed and equipped especially to illustrate the most approved methods of dairy practice.

The Experiment Station Dairy Barn is a new building, 110 by 38 feet, located on one of the highest elevations of the College property. It is a thoroughly modern structure from the standpoint of both convenience and sanitary conditions. It has a concrete floor, is lighted by electricity, and contains water in all parts of the building for washing floors, mixing foods, etc. It is fitted with 38 Taylor steel stanchions, which are both strong and comfortable. At one

end of the building are four 50-ton silos, and the second floor, which has a capacity of 50 tons of loose hay, is equipped with a hay-carrier that will elevate a load of hay at a time.

A smaller barn, 50 feet in the rear, provides hospital stalls for sick cows, and also stalls and pens for young calves.

A number of paddocks and pastures have been provided to facilitate the management and to furnish sufficient pasturage for the stock.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the equipment for instruction in agriculture.

Mechanical and Electrical Buildings

The Mechanical Building is a substantial brick structure containing about 30,000 square feet of floor space. On the first floor are the mechanical laboratory, machine shop, forge shop, foundry. On the second floor are the offices and recitation rooms. The wood shop occupies the whole of a two-story wing, 45 by 100 feet. The third floor is devoted entirely to the division of drawing.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure, 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use, it also contains the electrical engineering lecture room.

Chemical Buildings

The Chemical Department occupies two buildings. One is a two-story brick structure, 50 by 80 feet, covered with slate, and finished inside with Southern pine. Overlapping this at one corner, and connected with it, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building constitutes a commodious structure adequate to all the needs of the department.

Textile Building

The Textile Building is a two-story brick structure, with basement, of modern cotton mill design and construction. The first floor is occupied by a recitation room, picker, carding and spinning rooms, and an office. On the second floor are the designing and weaving rooms, a laboratory for experimental dyeing, and two offices. In the basement is located the dyeing, bleaching and printing machinery.

Residences and Hotel

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, and thirty smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building, situated on a hill overlooking the campus, is operated as a club by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

Water, Light and Heat

The General Water Supply is collected from springs and surface streams, and is pumped from two stations into a standpipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage, etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and a number of residences are connected with an adequate sewer system, which empties into Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station. The seven principal College buildings are heated by steam.

EQUIPMENT AND PRACTICAL INSTRUCTION

Agricultural Department

AGRICULTURE.

The classroom, laboratory and office of the agricultural division are located on the first floor of Agricultural Hall, Rooms 11, 12 and 13. The laboratory is supplied with the necessary equipment for familiarizing students with the more important economic plant seed.

The College farm has a large storage barn provided with silos, a cow barn furnished with various forms of stanchions, a mule barn provided with the most improved forms of stalls and feedracks, implement and wagon sheds for storage of tools, etc., compost building for making compost in large quantities, and two large cribs for storage of corn.

Among agricultural machinery and implements may be mentioned the following: Self-binder, corn-harvester, Deering ball-bearing mower, Osborne mower, self-dumping rake, check-row corn-planter, Buckeye cultivator, B. F. Avery cultivator, Tower cultivator, disc-cultivator, spring-toothed harrow, smoothing harrows, various forms of pulverizers, manure-spreading machines, fertilizer and grain drill, various forms of small fertilizer drills, Planet, Jr., drill, two Planet, Jr., plows, scientific mill, stone grist mill, Tornado ensilage cutter, small thresher, hand-gin, rock-crusher, road machine, three terrace levels, and a 10 K. W. electric motor.

GEOLOGY AND MINERALOGY.

The division of geology and mineralogy occupies three rooms on the second floor of the new agricultural building.

The systematic collections contain about 1,800 labeled specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory, and are available to students and public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying the more important species at sight, and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photo-micrographic camera, and all important accessories, are also provided.

The classroom is supplied with large physical wall maps of the world and of all the continents, a complete series of topographic contour maps, furnished by the United States Geological Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geological department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

SOIL PHYSICS.

The soil physics laboratory is located on the ground floor of Agricultural Hall and is provided with apparatus necessary for the determination of water content, absorptive capacity, water-holding power, and other physical

properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

HORTICULTURE.

The classroom and office of the horticultural division are located on the first floor of the Agricultural Hall. The horticultural laboratory is located on the ground floor of the Agricultural Hall, and is equipped for giving practical instruction in general horticultural work. The greenhouse, hotbeds and cold-frames are located in the horticultural grounds where the principal practical work is done. The gardens, orchards and vineyard are field laboratories for instruction in horticulture.

VETERINARY SCIENCE.

The veterinary hospital has been described in the account of "Ground and Buildings" on the preceding pages.

The classroom, laboratory and office of the veterinary division are located in Agricultural Hall, the laboratory and office on the first floor, Rooms 15 and 16, and the classroom on the ground floor. The laboratory is supplied with microscopes, microtome, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work. The lecture-room has a concrete floor, elevated seats, and is so arranged that the largest domestic animal may at any time be used before the classes for demonstration purposes.

The veterinary hospital is a frame structure of modern design, 48 by 65 feet, containing rooms for office, drugs and dissecting, besides stalls, feed-bins, water supply and electric lights, and a revolving operating table.

ZOOLOGY AND ENTOMOLOGY.

The laboratory, recitation room and office of this division are on the second floor of Agricultural Hall. The laboratory is equipped with simple and compound microscopes, microtomes, dissecting instruments, photographic outfit, stereopticon, lantern slides and charts. The entomological cabinet contains a large number of injurious and beneficial insects.

The students have access to a small but carefully selected entomological library.

DAIRYING AND ANIMAL HUSBANDRY.

The dairy building is provided with steam plant and water-works, and everything required for making butter and cheese. In this laboratory are located the leading makes of cream separators, churns, and milk-testers.

The new experiment barn is provided with modern apparatus and conveniences for the proper handling of cattle, and the following breeds of cattle have been recently purchased and placed at this barn for experimental purposes: Ayrshire, Devon, Jersey, Hereford, Polled Angus, Polled Durham; Shorthorn (bare-faced dairy strains); Guernsey, Holstein; also six each of registered Shropshire and Southdown sheep.

BOTANY AND BACTERIOLOGY.

These laboratories are located on the third floor of Agricultural Hall, Rooms 21, 22 and 23. They contain a good equipment for satisfactory work in botany and bacteriology, including 25 dissecting microscopes, 20 compound microscopes, student dissecting sets, student microtomes, Zimmerman microtome, embedding baths, balances, water

still, incubator, Arnold and Koch sterilizers, autoclave, dry ovens, anærobic apparatus, cameras for ordinary and photo-micrographic work.

The students have access to a small botanical library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, the herbarium of the Botanist, including about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of central New York. A set of the F. V. Coville plants, of New York State, has also been added recently. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora.

Mechanical and Electrical Department

ELECTRICAL ENGINEERING.

Electrical Instrument Laboratory.—This is a separate brick building, designed especially for delicate electromagnetic work—no iron, steel or other magnetic substances having been used in its permanent construction. It contains, in addition to all necessary elementary apparatus, the following instruments: Kelvin-Deka ampere balance, Kelvin four-coil astatic galvanometer, four D'Arsonval dead-beat galvanometers, large ring tangent galvanometer, three Elliott Brothers' standard resistance sets, Elliott Brothers' standard tangent galvanometer, Queen's standard ballistic galvanometer, Nalder Brothers' sensitive galvanometer, Rowland-D'Arsonval ballistic galvanometers, Willyoung standard condenser, Becker's chemical balance,

Cahart-Clark standard cell, thermometers, Wheatstone bridges, storage and primary cells, etc.

Dynamo Laboratory.—To meet the demands of larger attendance and increased equipment, a new building has been provided in which is installed the dynamo-electric machinery. This building also contains a classroom and a dark room for photometric work. It is a single story brick structure, 37 by 80 feet, with basement for supply room.

The main floor is divided into a classroom 25 by 35 feet, and a dynamo laboratory room 53 by 35 feet. The building is heated by steam and lighted by inclosed arc and incandescent lamps.

The lecture-room has elevated seats and is equipped with a complete line of illustration models, apparatus and electrical instruments. It contains an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory contains, in addition to rheostats, speed-counters, switches, and other small apparatus, the following machines and instruments:

50 H. P. high-speed McEwen automatic engine.

Direct Current Generators.—15 K. W. Mather, 17 K. W. Lundell, $2\frac{1}{2}$ K. W. Crocker-Wheeler, two 2 K. W. Kester.

Direct Current Motors.—15 and 10 H. P. Kester, three $\frac{1}{6}$ H. P. Crocker-Wheeler.

Direct Current Instruments.—Weston laboratory standard voltmeter, set of Weston portables, Jewell ammeter and voltmeter, Weston switchboard ammeter and voltmeter, Thompson recording wattmeter, etc.

Are Lighting Apparatus.—Brush and Thompson-Houston generators, General Electric Company constant

current transformer, principal makes of open and inclosed arc lamps.

Alternating Current Apparatus.—15 K. W. General Electric Company 2 and 3 and 6 phase revolving field generator complete with marble switchboard and full set of indicating instruments.

Seven and one-half K. W. General Electric Company 1, 2, and 3 phase rotary converter; 7 K. W. 3 phase converter built by students.

General Electric Company 2 and 3 phase induction motors. Six 3,000 watt constant potential transformers. Assortment of smaller transformers, motors and models.

Alternating Current Instruments.—Two Weston and 1 General Electric wattmeters, Weston standard A. C. voltmeter, 6 Thompson inclined coil ammeters and voltmeters, Cardew and electrostatic voltmeters, Kelvin ampere balance, Siemens electro-dynamometer, Stanley hot-wire ammeter.

Miscellaneous.—Two Schaffer & Budenberg tachometers, leading types of lightning arresters, fuse testing apparatus, etc.

The dark room contains a complete outfit for high potential, high frequency and X-ray work, and a Deshler-McAllister central station type photometer, with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50 H. P. engine or two 20 H. P. motors. Steam and electric power for these is furnished by the central power plant described on page (?). Students have access to this plant, and are thus enabled to see the practical workings of a combined electric power, light, and heating plant, and to test its efficiency. The problem of power distribution and utilization can also be studied from a practical example.

MECHANICAL ENGINEERING.

This laboratory occupies a room 41 by 45 feet, and contains the following equipment:

For Steam Engineering.—15 H. P. horizontal, locomotive type boiler; 6 H. P. vertical boiler; Erie 6 H. P. plain slide-valve steam engine; 6 H. P. vertical steam engine built in the shops; Payne 15 H. P. high-speed automatic engine; Corliss cross-compound condensing steam engine, arranged so that either side may be run condensing or non-condensing and each side independent of the other; Wheeler surface condenser with combined air and circulating pumps; set of steam-gauge testing apparatus; Carpenter's separating steam calorimeter; 2 throttling steam calorimeters; 6 steam engine indicators of various makes; 2 standard injectors.

For Hydraulic Engineering.—Two hydraulic rams; Pelton water motor; power triplex pump; 3 duplex pumps of different makes; 3 weirs; recording altitude gauge; 6 pressure and altitude gauges.

For Compressed Air.—Clayton air compressor with jacketed cylinders; improved air motor.

For Fuel and Lubricants.—Carpenter's fuel calorimeter, with scales, balances, and oxygen generating devices; standard viscosimeter.

For Testing Building Materials.—100,000-pound Olsen automatic vertical testing machine driven by 5 H. P. Westinghouse electric motor, and fitted for tension, compression, and transverse testing; Fairbank's cement testing machine; 3,000-pound transverse testing machine. The laboratory also contains a 5 H. P. Otto gasoline engine, an Ericsson hot-air engine, a 6 H. P. transmission dynamometer, grad-

uated to read horse-power direct and built by students, and an assortment of standard thermometers, weights and measures. The apparatus is so arranged that any of it may be used for separate or combined tests, or for any original investigations. Besides the equipment in this room, the electric light and power plant, the heating plant of the College and barracks, the isolated plants at the dairy, horticultural grounds and pumping station are available for instructional purposes.

PHYSICS.

The physical lecture-room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and experimental work of a general course in physics.

DRAWING AND DESIGNING.

The drawing rooms occupy the entire third floor of the Mechanical Engineering building. The third and fourth floors of the tower are also used as a dark room and blue-print room, respectively. An additional room in the Textile building has been temporarily fitted up for the use of the freshman class. A good selection of drawings and models in these rooms are of great benefit to the student in his work. These rooms are equipped to accommodate from 20 to 36 students at a time, with cases, boards and T-squares for about 500. Members of all classes are required to furnish their own drawing instruments. All instruments used by students must be approved by the instructor in charge; an inferior grade of instruments will not be acceptable. Students are advised to buy their instruments at the Cadet Exchange, where samples can be seen and wholesale prices obtained.

FORGE AND FOUNDRY WORK.

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 by 94 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down-draft forges, 18 Eagle anvils, equipped with small tools, a 60-inch exhaust fan, a No. 7 pressure blower, a drill-press, an emery-grinder, a bending-cone, a Buffalo iron-shear, two swage-blocks, a vise and work-bench. The other system consists of 18 Sturtevant down-draft forges, 18 Eagle anvils, thoroughly equipped with small tools, a 60-inch exhaust fan, directly connected, and a No. 4 pressure blower, directly connected.

Foundry.—This building occupies a space 43 by 76 feet and is free from posts or other obstructions. It is equipped with a 26-inch Victor Collian cupola, a Millett's core oven, a two-ton post crane, 8 improved molder's benches, an 18-inch brass furnace, with its usual complement of crucibles, tongs, etc., full set of molder's tools for the accommodation of 20 students, besides the usual accessories to the foundry, such as ladles, flasks, etc.

MACHINE WORK.

The machine shop is located in the southwest wing of the Mechanical building, which wing is 45 by 100 feet, well lighted, heated and ventilated.

It contains 17 benches, with vises, 105 kits of tools, and the following machine tools: 1 18-inch by 12-foot engine lathe; 1 18-inch by 8-foot engine lathe; 3 14-inch by 6-foot engine lathes; 4 14-inch by 6-foot Lodge & Shipley lathes; 2 14-inch by 6-foot F. E. Reed compound rest engine lathes; 2 14-inch by 6-foot Hendey compound rest engine

lathes; 1 10-inch by 4-foot F. E. Reed pattern-maker's lathe; 1 15-inch by 8-foot speed lathe; 1 Cincinnati Universal milling machine, No. 3, all power feeds; 1 Lodge & Davis' Universal milling machine; 1 18-inch drill press; 1 28-inch back-gearred drill press; 1 22-inch by 6-foot Powell planer; 1 Cincinnati cutter and tool-grinder; 1 15-inch Gould & Eberhardt crank-shaper; 1 dry-emery grinder; 1 12-inch power hacksaw; 1 36-inch grindstone; 1 22-inch Leland & Faulconer wet emery tool-grinder; 1 American twist drill-grinder; 1 10-inch slotting machine, built by New Haven Manufacturing Company; 1 fan; 1 forge. The tool-room in connection with the shop contains all tools, etc., necessary for use with the machines.

The 7 H. P. motor which drives the machinery was built by students.

WOODWORK.

The woodshop occupied the two-story wing on the east side of the Mechanical Engineering building, 45 by 100 feet. The lower floor contains the freshman classroom, equipped with 15 work-benches and sets of tools, 6 turning lathes, with tools for each, and other tools for handwork. On this floor is also the planing mill machinery, consisting of a double-roll planer, power rip and cut-off saws, band saw, scroll saw, 16-inch jointer, moulding machine, mortising machine, tenoning machine, emery-grinder, lathe with 12-foot bed, etc.

The upper floor is devoted principally to the work for the sophomore class, and is fitted up with 15 work-benches and 90 sets of tools—one set for each student; 6 10-inch turning lathes, large pattern lathe, combination saw and boring machine, double head-shaper, panelling machine,

carving machine, jigsaw, universal trimming machine, special door and sash clamps, steam glue-pots, miter-cutters, etc. The power is supplied by electric motors conveniently located in the various rooms. A large lumber yard and dry-kiln provide seasoned lumber at all times.

Chemical Department

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Two of these, connecting with each other, are employed as a laboratory for the agricultural seniors. Of the other rooms on this floor, one is a laboratory for post-graduate students and one a balance room, while the third is reserved for such use as the ever-increasing demands upon the department may require.

On the second floor of this building there are two large laboratories, one for the juniors in analytical chemistry; the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accommodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables,

water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to the chemical work of the State and of the Experiment Station. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is used for the agricultural analysis of the Experiment Station. Adjoining this is a balance room, in which provision is made also for the optical and electrolytic apparatus. Of the remaining rooms, one is used for water analysis, the other as an office.

On the second floor of this building there are seven rooms: a lecture-room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library and professor's laboratory.

The lecture-room will seat 170 students, the seats being arranged in tiers.

The hoods in this building are all connected by earthenware pipes with a tightly built room just under the roof, over which there is a large ventilator.

The rooms in the basement are used for assaying ores, for the preparation of agricultural products for analysis, and for storage. An electric motor, located in one of these rooms, supplies the power which drives the machinery for grinding and pulping samples of vegetable substances.

Department of Textile Industry

The building is a brick structure of modern cotton mill design, 168 by 75. It is of the slow-burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing offices, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the students an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture-room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30 H. P., 220-volt, direct-current Westinghouse motor, driving the carding machinery, and a 20 H. P., 220-volt, direct-current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by the experimental dyeing laboratory, hand looms, power looms, a lecture-room and two offices. The power machinery on this floor is driven by a 20 H. P., 220-volt, direct-current General Electric Company motor.

The basement, which is situated under the right-hand

half of building, is occupied by the dye-house, and is nicely equipped for that purpose.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-heating system and automatic fire-sprinklers from The D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

CARDING DIVISION.

Pickers.—One Atherton automatic feeder; one Atherton breaker; one Atherton finisher lapper, with evener motion.

Cards.—One Saco & Pettee 40-inch revolving top flat card; one Mason 40-inch revolving top flat card; two traverse wheel grinders; two drum traverse grinders; stripping and burnishing rolls; two complete sets of carder's tools.

Combing.—One Mason sliver lap machine; one Mason ribbon lap machine; one Mason six-head combing machine.

Railway Heads.—One Saco & Pettee railway head, with evener motion, stop motions, and metallic rolls; one Mason railway head, with evener motion, stop motion, and metallic rolls.

Drawing.—One Saco & Pettee drawing frame, four deliveries, stop motions, and metallic rolls; one Mason drawing frame, four deliveries, stop motions, and metallic rolls.

Fly Frames.—One Saco & Pettee 12-inch by 6-inch 40-spindle slubber, with latest differential motion; one Saco & Pettee 8-inch by 4-inch 60-spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 7-inch by 3½-inch 80-spindle fine roving frame, with latest

differential motion ; one Woonsocket 6-inch by $2\frac{1}{2}$ -inch 96-spindle jack roving frame, with Daly's improved differential motion.

SPINNING DIVISION.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles ; one Mason combination warp and filling ring spinning frame, 112 spindles ; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts ; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mule Spinning.—One Mason self-acting spinning mule, 120 spindles, $1\frac{3}{4}$ -inch gauge, with all latest improvements.

Spooling.—One Draper spooler, 40 spindles ; one Saco & Pettee spooler, 72 spindles ; one Barber & Coleman knotter.

Twisting.—One Draper combination wet and dry twister, 48 spindles ; two Fales & Jenks wet twisters, combination filling and taper top wind, 70 spindles each.

Winding.—One W. W. Altemus & Son bobbin winder ; one Atwood-Morrison Company bobbin winder ; one Geo. W. Payne & Company skein winder ; one Universal cone and tube winder.

Reeling.—One D. A. Tompkins Company adjustable reel, 50 spindles.

Warping.—One Draper section warper ; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

The divisions of carding and spinning are equipped with all necessary supplies, such as doff-boxes, roving-cans, bob-

bins, spools, cops, cones, tubes, and change gears for all machines.

WEAVING DIVISION.

Hand Looms.—Seventeen hand looms, with 4 by 4 box motion, and 30 harness shedding engines, arranged for four beam work.

Power Looms.—One 40-inch Northrop cam loom, with warp stop motion and automatic filling magazine; one 28-inch Northrop cam loom, with warp stop motion and automatic filling magazine, also fitted with Stafford 20-harness dobby; one Mason 36-inch gingham loom, with 4 by 1 box motion; one Mason 40-inch loom, with Stafford 20-harness dobby, also arranged for center selvage motion; one Mason 44-inch fancy cotton loom, with 24-harness dobby; one Stafford 30-inch fancy cotton loom, with 20-harness dobby and leno attachment; one Stafford 30-inch dress-goods loom, with Stafford 400-hook, single-lift, swing-cylinder Jacquard; one Knowles 40-inch "Gem" loom, with 30-harness dobby, 4 by 4 box motion; one Crompton & Knowles 36-inch fancy cotton towel loom; one Crompton 65-inch loom, 4 by 1 drop box motion, fitted with 624-hook, double-lift, swing-cylinder Jacquard, tied for weaving table damask; one Whitin 40-inch cam loom, arranged to weave up to six harness; one Whitin 40-inch fancy cotton loom, fitted with 20-harness dobby; one Whitin heavy pattern duck loom; one Knowles 30-inch fancy cotton loom, 2 by 2 box motion, 16-harness dobby; one Kilburn & Lincoln 40-inch loom, arranged for dobby.

Dressing.—One Davis & Furber Dresser, complete.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

This division is also equipped with one floor stand, fitted with eight-harness dobby and leno attachment, built especially for illustrating leno weaves; one Jacquard tying-up frame; warping pegs, beaming frames; drawing-in frames; extra heddles and heddle frames; reeds; change gears, etc.

DIVISION OF TEXTILE CHEMISTRY AND DYEING.

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dye-house. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accommodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

Dye-House.—Nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one steaming and aging box; one mercerizing apparatus for yarn; one calico printing machine; one 20-gallon copper kettle; one set copper measures; one dry closet. There is also an equipment of reels, yarn-testers, analytical balances, etc., and necessary instruments for experimental purposes.

DEPARTMENT LIBRARY.

For the use of students and instructors, a reading room in the textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading period-

icals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department and an equipment of old hand machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

Civil Engineering

The collection of field instruments contains the following: Engineer's transits, with stadia and solar attachment; 3 20-inch wye levels, 4 railroad compasses, 2 6-inch vernier compasses; plane table with 9-inch telescope, vertical circle and stadia; drainage level, precision level, current meter with electric recorders, sextant, aneroid barometer, 4 12-foot self-reading leveling and stadia rods, 12-foot New York leveling rods, 12-foot Boston leveling rod, cross-section rod with clinometer, 6 surveyor's chains, 2 engineer's chains, 6 standard 100-foot steel tapes, 2 66-foot steel tapes, 50-foot steel tape, and a full supply of ranging poles, flag poles and other accessories.

The office equipment includes planimeter, slide rules, and drafting instruments and appliances. In addition to the drawing done under the immediate direction of the instructor in civil engineering, the regular work in drawing and designing provided for students pursuing this course is arranged with special view to their needs. The engineering laboratory and the shops and drawing-room in which the civil engineering students receive an important part of their instruction, are described under the equipment of the mechanical and electrical department.

Library*

In the main building is a series of rooms specially constructed for the use of the Library. There are now upon the shelves 8,517 volumes, classified under the various heads of literature, history, biography, science, and reference books. In addition to these in the general library, there are 1,493 volumes in Experiment Station and department libraries of the College. There are also about 4,400 government publications and 200 reference books, together with about 5,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading-room in which the students have access to 19 of the leading weekly and monthly periodicals, 12 technical journals, the principal daily papers of the State and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

*See donations to library, page 145.

DEPARTMENTS OF THE COLLEGE
DETAILED DESCRIPTIONS OF COURSES



DEPARTMENTS OF THE COLLEGE

For administrative purposes, the College is divided into seven departments, each presided over by a director, who has general supervision of all the work and interests of his department. The departments comprise the various divisions indicated below, which are in the immediate charge of the professors, associate and assistant professors, and instructors of the respective departments.

Numbers in parentheses refer to description, beginning on page (.?.)

1. Agricultural Department

Agriculture (100-108).

Geology and Mineralogy (110-117).

Horticulture (120-122).

Veterinary Science (130-137).

Zoölogy and Entomology (140-142).

Dairying and Animal Husbandry (150-162).

Botany and Bacteriology (170-176).

2. Mechanical and Electrical Department

Electrical Engineering (200-203).

Mechanical Engineering (210-215).

Physics (220-222).

Drawing and Designing (230-239a).

Forge and Foundry Work (240-242).

Machine Work (250-251).

Woodwork (260-262).

3. Chemical Department

Chemistry (300-306).

Metallurgy (310-311).

4. Textile Department

Carding and Spinning (400-409).

Weaving and Designing (410-414).

Textile Chemistry and Dyeing (420-421).

5. Academic Department

English (500-504).

History and Political Economy (510-515).

Mathematics and Civil Engineering (520-537).

German (540-541).

6. Military Department

Military Science and Tactics (600-602).

7. Preparatory Department

DETAILED DESCRIPTIONS OF COURSES

AGRICULTURAL DEPARTMENT

Professor Harper, Director

Agriculture

Professor Harper.

*Associate Professor C. L. Newman.**

100. *Foundations of Agriculture*

FRESHMAN CLASS; ALL COURSES.

A broad elementary introduction to the study of agriculture, embracing treatment of soils, seeds and plants.

101. *Field Crops*

JUNIOR CLASS; COURSES I, IA, II.

The history, classification, characteristics, adaptation, culture, harvesting, marketing and uses of field crops. Terracing.

102. *Farm Practice*

JUNIOR CLASS; COURSES I, IA, II.

The student is taken to the field and performs the work appropriate to different crops, thus becoming familiar with requirements of the various field crops.

103. *Farm Practice*

JUNIOR CLASS; COURSES I, II.

A continuation of the work begun in Sophomore year and embracing harvesting, seed selection, storing and marketing. Use of tools and farm machinery.

104. *Soil Physics*

JUNIOR CLASS; COURSE I.

The work in soil physics enables the student to understand the effects of the different methods of treatment of soils, and the influence of these methods upon moisture, texture, aeration, fertility and production. The course is supplemented by laboratory determinations of specific gravity, relative specific gravity, water-holding capacity, capillary power, and rate of percolation of various soils; experiments upon rates of evaporation from the surface, and the effects of differ-

*Resigned to take effect July 1, 1908.

ent mulches and methods of cultivation upon retention of soil moisture; mechanical analysis of soils.

105. *Agricultural Research and Literature*

SENIOR CLASS; COURSE I.

The Senior Class will study the results of experiment work, conduct experiments, interpret results, and prepare them in bulletin form. Research in agricultural reports and kindred literature will be required upon assigned subjects, the results to be reported in writing.

106. *Advance Agronomy and Plant Breeding*

SENIOR CLASS; COURSE I.

A critical study of the methods of crop production and the principles and practices of plant breeding and improvement. The study of cotton and corn is taken up in detail, together with systems of rotation appropriate with these crops. The second term practical work is devoted to classification and grading of cotton. This is given by the Textile Department.

107. *Agricultural Physics and Use of Fertilizers*

SENIOR CLASS; COURSES I, IA.

The equipment of the soil laboratory is such that students can successfully conduct experiments along the lines relating to soil management and soil fertility. This is a continuation of the work begun in the Junior Class. Lectures are delivered on farm drainage; effect of cultivation on the texture of soils; mixing fertilizers and their economic use under field crops.

108. *Rural Economy and Farm Management*

SENIOR CLASS; COURSES I, IA.

Lectures and recitations upon the employment and management of farm labor, farm equipment and farm management. The lectures include the interrelations of economics and agriculture. Lectures upon the cost and relative profit of various farm operations and systems.

Geology and Mineralogy

Professor Calhoun.

110. *Elementary Mineralogy*

JUNIOR CLASS; COURSE V.

Laboratory study of crystal forms by the use of models and natural crystals; chemical and physical properties of minerals; practice in the determination of unknown specimens. This is a brief course, intended to give the student an adequate conception of the science of mineralogy together with some practical acquaintance with the more common and important minerals.

111. *Mineralogy*

JUNIOR CLASS; COURSES IA, III.

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to readily identify all but the rarer minerals.

112. *Elementary Geology*

SENIOR CLASS; COURSES I, IA, II, IV, V.

The elements of dynamical, structural and historical geology. The influences of geologic phenomena on man are emphasized, particularly in the study of rock-decomposition and the formation of soils, the processes of erosion and deposition, and the resultant topographic forms.

113. *General Geology*

JUNIOR CLASS; COURSE III.

A broad course in the elements of general geology. Special stress is laid on structural and dynamical geology in their relations to the formation of rocks and rock-structures, the metamorphism of rocks, and the deposition of minerals and ores. In historical geology special attention is given to the development of the North American continent.

114. *Petrography*

SENIOR CLASS; COURSE III.

A study of the structure, composition, origin, and classification of various families of rocks, their distribution, modes of occurrence, and geological importance; microscopic characters of rock-forming minerals, and the use of the petrographic microscope. The course is supplemented by work in the field and laboratory, and the student becomes familiar with rocks and with practical methods of investigation, and their applications to the problems of lithological geology.

115. *Economic Geology*

SENIOR CLASS; COURSE III.

A general survey of geological products of value, including metallic and non-metallic minerals, and building stones; their origin and nature, distribution, modes of occurrence, and methods of exploitation. The course deals particularly with the economic deposits of

North America, with briefer reference to those of other countries for purposes of comparison and for the elucidation of problems of origin, exploitation, etc. The student is required to read and prepare abstracts of the more important monographs and reports.

116. *Practical Geology*

SENIOR CLASS; COURSE III.

Field study and reports of geological processes and phenomena, rocks and rock-structures, both original and secondary, accompanied by laboratory exercises by means of specimens, models, photographs, maps and sections; interpretation and representation of geologic phenomena, and training in the principles and methods of geological surveying, the construction of geological maps and sections, and the preparation of reports.

For description of equipment, see page 69.

117. *Mineralogy*

SENIOR CLASS; COURSE I, IA.

A general course on the soil-making minerals and rocks. The origin of soils will also be studied.

Horticulture

Associate Professor C. C. Newman.

Instruction is given in the Junior and Senior Classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. These practical exercises enable the student to become familiar with all the details of the work.

120. *Propagation and Management of Nursery Stock*

JUNIOR CLASS; COURSE II.

Lectures are given on the following subjects and special attention is paid to the practical work along these lines: Stratification of seeds; sowing seeds; seed testing; separation and division; budding and grafting; grading and storing nursery stock; nursery management.

Text-book: The Nursery Book, by L. H. Bailey.

121. *Vegetable Gardening*

JUNIOR CLASS; COURSES I, IA, II.

Construction of hot-beds and cold-frames, their use and management; preparation of the soil; fertilizing; seed sowing; transplanting and cultivation; gathering; storing and marketing; spraying and spraying equipment.

Text-book: Principles of Vegetable Gardening, by L. H. Bailey.

122. *Ornamental Horticulture and Floriculture*

SENIOR CLASS; COURSE I, IA.

The work includes ornamental horticulture and floriculture, the

propagation and care of ornamental plants; general greenhouse work and management.

For descriptions of buildings, grounds, and equipment, see page 71.

Veterinary Science

Associate Professor Powers.

Assistant Barnett.

130. *Anatomy and Histology*

SOPHOMORE CLASS; COURSES I, IA, II.

An elementary course in gross and microscopic anatomy, arranged as an introduction to the study of the principles of stock judging and physiology.

131. *Veterinary Physiology*

JUNIOR CLASS; COURSE II.

While this course embraces the study of all the animal functions, especial attention is given to digestion, nutrition, reproduction, and milk secretion, these being of greatest importance in the animal industries.

Text-book: A Manual of Veterinary Physiology, by F. Smith.

132. *Physiological Demonstrations and Microscopy*

JUNIOR CLASS; COURSE II.

A laboratory course in physiology.

133. *Surgical Therapeutics*

JUNIOR CLASS; COURSE II.

In this course hemorrhages, inflammation, wounds, sprains, bruises and other accidental conditions are considered, together with the use of antiseptics, and the treatment of diseases of the hoofs.

134. *Sporadic Animal Diseases*

SENIOR CLASS; COURSE II.

A brief course in the non-contagious diseases of farm animals, especial attention being given to cause and prevention.

135. *Contagious Animal Diseases*

SENIOR CLASS; COURSE II.

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission, symptoms, cause, prevention and treatment of the diseases common to man and animals are studied. Especial attention is given to the contagious diseases most common in this State.

136. *Hygiene and Sanitary Science*

SENIOR CLASS; COURSE II.

Text-book: A manual of Veterinary Hygiene, by F. Smith.

137. *Veterinary Clinics*

SENIOR CLASS; COURSE II.

A free clinic is held at the veterinary hospital every Monday afternoon of the session, except on holidays and during examinations. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

For description of buildings and equipment, see page 71.

Zoology and Entomology

Associate Professor Conradi.

The instruction in this division is largely conducted by the laboratory method with lectures and recitations, and is so given as to lead the student to observe and think for himself, as well as to secure a working knowledge of the science for practical purposes.

140. *Introductory Entomology*

A systematic study of the various orders of insects, giving special attention to those of economic importance; metamorphosis, life history and habits. This is principally a laboratory and field course, bringing the student in direct contact with the various forms.

Reference: Comstock's Manual for the Study of Insects.

141. *General Invertebrate Zoölogy*

SOPHOMORE CLASS; COURSES I, IA, II.

This course includes a general discussion of groups and dissection of types, especially of the forms related to insects, and is further extended to lay a foundation for a knowledge of animal development. Animals of economic importance are given special attention.

Books of Reference: Invertebrate Morphology, by McMurrich; The Riverside Natural History; Text-book of Zoology, by Parker and Haswell.

142. *Economic Entomology*

SENIOR CLASS; COURSES I, II.

By laboratory studies and field work, the students in this course will be made familiar with the most important injurious insects. For the systematic and biological work, a collection of one hundred species, with full notes on the habits of twenty-five, will be required. The practical work will consist of the preparation and application of insecticides.

Text-books: Manual for the Study of Insects, by Comstock; Elements of Insect Anatomy, by Comstock and Kellogg.

Books of Reference: Insects Injurious to Fruits, by Sanders; Economic Entomology, by Smith; Guide to Study of Insects, and a Text-book of Entomology, by Packard; United States Government Experiment Station and State publications on Entomology.

For description of equipment, see page 72.

Animal Husbandry and Dairying

Associate Professor Nourse.

Instructor Burgess.

150. *Types of Cattle, Horses and Mules*

SOPHOMORE CLASS; COURSES I, IA, II.

Market and breed types of dairy and beef cattle; their origin and history. Types and breeds of horses and mules.

152. *Types of Sheep and Hogs*

SOPHOMORE CLASS; COURSES I, IA, II.

Breed and market types of sheep and hogs; their origin and history.

153. *Principles of Breeding*

SOPHOMORE CLASS; COURSES I, IA, II.

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding; in-an-in breeding; line breeding, etc.

154. *Stock Judging*

SOPHOMORE CLASS; COURSES I, IA, II.

Judging dairy and beef cattle, sheep, hogs, horses and mules, and score-card practice.

155. *Care and Management of Dairy Cattle*

JUNIOR CLASS; COURSE II.

Care and management, housing and feeding dairy cattle.

156. *Stock Feeding (short course)*

SENIOR CLASS; COURSE I.

Stock feeding, including the consideration of the comparative food value and cost of all Southern feeding stuffs; economic methods of feeding to produce milk, beef, etc.; and method of feeding work animals.

157, 158. *Stock Feeding*

SENIOR CLASS; COURSE II.

Stock feeding, including composition and digestibility of feeding stuffs; their preparation, use and cost; nutritive ratios; digestion, etc. The available feed stuffs of the South are discussed at length.

159. *Group Judging*

SENIOR CLASS; COURSE II.

Judging groups of animals similar to county and State fair work.

160. *Pedigree Work and Compounding Rations*

SENIOR CLASS; COURSE II.

161. *Milk and Its Products*

JUNIOR CLASS; COURSES I, II.

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pasteurization; milk testing; dairy machinery; manufacture of butter, cheese and ice cream, and marketing.

162. *Practical Work in Creamery*

JUNIOR CLASS; COURSES I, II.

Cream separation and ripening; pasteurization of milk and cream; bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

For description of buildings and equipment, see page 72.

Botany and Bacteriology

Associate Professor Barre.

171. *General Botany*

FRESHMAN CLASS; COURSES I, IA, II.

A preliminary course in general botany. Typical forms of all the great groups of plants, from the simplest Algæ to the complex types of flowering plants, are taken up and studied both in laboratory and classroom.

172. *Plant Physiology*

SOPHOMORE CLASS; COURSES I, IA, II.

A study of the structure and functions of plants, the object being to teach the student how plants live and grow and why they are dependent on certain physical factors as light, water and air.

173. *Systematic Botany*

SOPHOMORE CLASS; COURSES I, IA, II.

A study of the morphology and taxonomy of some of the typical forms of Angiosperms.

174. *Elements of Forestry*

SOPHOMORE CLASS; COURSES I, IA, II.

The general principles underlying the practice of forestry are briefly studied. The taxonomy of the native trees receives considerable attention.

175. *General Bacteriology*

JUNIOR CLASS; COURSES I, IA, II.

The nature and distribution of bacteria, the facts underlying the phenomena of decay and disease, and the technique of practical work in the science, form the subject-matter for the course. With Course II particular attention is given to methods in bacteriological analysis of water and soils.

176. *Plant Pathology*

JUNIOR CLASS; COURSES I, IA, II.

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed.

MECHANICAL AND ELECTRICAL DEPARTMENT

Professor Riggs, Director.

Electrical Engineering

Professor Riggs.

Assistant Professor Dargan.

200. *Electricity and Magnetism*

JUNIOR CLASS; COURSE IV.

Study of the principles of electricity and magnetism, and the elementary design of electro-magnetic mechanism. Wiring calculations, incandescent lighting, etc.

Text-books: Elementary Lessons in Electricity and Magnetism, by Thompson; Elementary Electricity and Magnetism, by Jackson.

201. *Electrical Laboratory Practice*

JUNIOR CLASS; COURSE IV.

Experimental verification of fundamental electrical laws; measurement of currents, electromotive force, resistance, permeability, capacity, etc.

Text-book: Electrical Laboratory Experiments, Riggs, Kyser and Dargan.

Reference Books: Ayrton's Practical Electricity; Nichol's Physics, Vol. I; Stewart and Gee's Practical Physics; Henderson's Practical Electricity and Magnetism, Vols. I and II.

202. *Dynamo Electric Machinery*

SENIOR CLASS; COURSE IV.

First half session: Study and design of direct current dynamo-electric machinery. Second half session: Study of alternating currents and their application to light and power. Special attention is directed to polyphase systems and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineering; Franklin's Alternating Currents and Alternating Current Machinery; Dynamo Design, by Riggs.

NOTE.—A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Engineering, and Course 238 in Mechanical Drawing.

203. *Electrical Laboratory*

SENIOR CLASS; COURSE IV.

Care, management and testing of arc and incandescent generators, direct current motors, etc. During third term management and test of single and polyphase machinery and apparatus.

Text-book: Electrical Engineering Experiments, by Riggs.

For description of buildings and equipment, see page 73.

Mechanical Engineering

Associate Professor Earle, S. B.

Assistant Professor Howard.

In this course the student is taught the application of his scientific, mathematical and technical knowledge to the design and construction of engineering structures, and of machinery and manufacturing plants in general.

210. *Mechanism*

JUNIOR CLASS; COURSES III, IV, V, VI.

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicyclic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-book: Stahl and Wood's Mechanism.

211. *Mechanics*

JUNIOR CLASS; COURSES III, IV, V, VI.

Motion, force, velocity, force system, moments of force, general principles, and methods of solving problems both analytically and graphically.

Text-book: Maurer's Technical Mechanics.

212. *Mechanics*

SENIOR CLASS; COURSES IV, V.

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Maurer's Technical Mechanics.

213. *Mechanical Engineering*

SENIOR CLASS; COURSES III, IV, V, VI.

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory and design of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; heating and ventilating systems; transmission of power; engineering specifications and the law of contracts. Theory of the strength of engineering materials. Graphical solution of problems. Hydraulics.

Text-book: The Steam Engine and Other Heat Motors, by Creighton.

214. *Mechanical Laboratory*

SENIOR CLASS; COURSES IV, V.

Study, use and calibration of water-meters, weirs, steam gages, indicators, dynamometers, calorimeters; efficiency tests of screw-jacks and hoists; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; erecting, lining up and setting the valves of the plain slide-valve and automatic cut-off steam engines;

indicator practice; horse-power and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

215. *Mechanical Laboratory*

SENIOR CLASS; COURSES III, VI.

Study, use and calibration of steam gages; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; erecting, lining up and setting the valves of plain slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps, firing and testing of steam boilers.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

For description of equipment, see page 76.

Physics

Associate Professor Poats.

The study of physics is begun in the Sophomore year by all regular students, and completed in that year by those students taking courses in agriculture and textile industry. All other regular students take physics, both theoretical and practical, in the Junior year.

The instruction is by lectures and recitations, special stress being laid upon principles and facts which are fundamental to the several engineering professions. The lectures and recitations are illustrated by numerous experiments before the class.

In the physical laboratory the student is taught to perform for himself all the experiments of a general laboratory course. The properties of matter, the laws of mechanics, heat, electricity, magnetism, light and sound are verified. Students are required to make accurate and neatly written reports of all experiments.

220. *Elementary Physics*

SOPHOMORE CLASS; ALL COURSES.

Properties of matter; physical measurements; mechanics of solids and fluids; electricity and magnetism.

Text-book: Carhart and Chute's Physics.

221. *Electricity and Magnetism, Heat, Sound and Light*

JUNIOR CLASS; COURSES III, IV, V.

Text-books: Carhart and Chute's Physics; Carhart's University Physics.

222. *Physical Laboratory*

JUNIOR CLASS; COURSES III, IV, V.

Experimental determination of the physical properties of matter and the verification of laws and mechanics; heat; sound; light; electricity and magnetism.

For description of equipment, see page 77.

Drawing and Designing

Associate Professor Lee.
Assistant Professor Klugh.
Instructor Bogard.
Instructor Burruss.
Assistant Professor Gantt.

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

230. *Freehand Drawing*

FRESHMAN CLASS; ALL COURSES.

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

232. *Mechanical Drawing*

FRESHMAN CLASS; COURSES III, IV, V, VI.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines, from sketches and models.

233. *Mechanical Drawing*

FRESHMAN CLASS; COURSES I, IA, II.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm building.

234. *Mechanical Drawing*

SOPHOMORE CLASS; COURSES III, IV, VI.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts.

234a. *Mechanical Drawing*

SOPHOMORE CLASS; COURSE V.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications; lettering; topographical drawing.

235. *Mechanical Drawing*

JUNIOR CLASS; COURSE IV.

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tinting, tracing and blue printing.

236. *Mechanical Drawing*

JUNIOR CLASS; COURSE V.

First half the same as Course 235; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

237. *Mechanical Drawing*

JUNIOR CLASS; COURSE III.

First half same as Course 235. Second half, drawing of furnace designs and other metallurgical appliances.

238. *Machine Design*

SENIOR CLASS; COURSE IV.

Necessary drawings for work under construction in the shops; details of steam engine and electrical machinery. Design drawing required in graduation thesis.

239. *Mechanical Drawing*

SENIOR CLASS; COURSE V.

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

239a. *Mechanical Drawing*

SENIOR CLASS; COURSE VI.

Cam drawing; Jacquard tie-ups, etc. This work is done in the Textile School.

For description of equipment, see page 77.

Forge and Foundry*Assistant Professor Gantt.**Assistant Lewis.***240. *Forge Work***

FRESHMAN CLASS; ALL COURSES.

Study of Buffalo down-draft forges; graduated exercises, embracing fundamental operations of forging, such as upsetting, bending, punching, twisting, welding, etc. Part of third term is devoted to working with tool steel, involving processes of annealing, hardening, tempering, etc.

241. *Foundry Work*

SOPHOMORE CLASS; COURSES III, IV, V, VI.

Names and uses of molders' tools; tempering and working of molding sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

242. *Forge Work*

FRESHMAN CLASS; COURSES I, IA, II.

Study of Buffalo down-draft forges. Short course, embracing fundamental operation of forging.

For description of equipment, see page 78.

Machine Shop

Assistant Professor Howard.

250. *Machine Shop*

JUNIOR CLASS; COURSES IV, V, VI.

Instruction begins at the bench with exercises in chipping, filing, scraping and polishing. Castings and drawings are given the student, and he is required to chip, file, scrape and polish each casting into the exact form and size represented by the corresponding drawing. From bench work the student is advanced to machine work, where he is taught turning, boring, polishing, drilling, threading, planing, milling, grinding, etc., in iron, brass and steel. In all cases the exercises are required to be worked to drawings. The graded course of exercises is designed to teach the fundamental principles and practices of machine metal-work from the simplest to the most difficult operations.

Only a few set exercises are given to teach important fundamental processes. It is the policy of the shop to keep several large machines in process of construction, requiring the students to do the work. Experience has taught that students take greater interest in making parts of a machine that is for actual use than in mere routine exercise work.

251. *Machine Shop*

SENIOR CLASS; COURSE IV.

The Senior year is devoted to a more advanced work in the construction of engines, dynamos, motors and other machines. The student is encouraged to work from his own designs as far as possible, but is guided and directed by the instructor in charge.

For description of equipment, see page 78.

Woodwork

Assistant Professor Hook.

Assistant Gardner.

The course in woodwork does not aim to make the student a skilled workman, but rather to teach the proper use of tools and impress the importance of working to exact dimensions. At the same time, it gives a certain amount of manual dexterity, useful in every vocation.

The course covers two years, beginning with the most elementary principles and advancing gradually by a series of graded exercises to the more complicated instructions where special methods and tools are required. All work is done from working drawings, and commercial shop methods are constantly employed.

260. *Woodwork*

FRESHMAN CLASS; COURSES III, IV, V, VI.

Use and care of tools; graded exercises in carpentry, joining, wood-turning; construction of articles from working drawings; use of turning lathe and other simple machinery; construction of boxes, desks, etc., involving dove-tailing, gluing, polishing, etc.

261. *Woodwork*

FRESHMAN CLASS; COURSES I, IA, II.

The work is given for two terms only, and is the same as Course 260, except that a study of farm structures, such as fences, gates, houses, etc., is substituted for a part of the work given in Course 260.

262. *Woodwork—Pattern Making*

SOPHOMORE CLASS; COURSES III, IV, V, VI.

Use of wood-working machinery, as planer, jointer, moulder, mortise and tenoning machine, carving and paneling machine, shaper, circular and jig saws. Pattern work, with graded exercises, illustrating the principles of draft and shrinkage, and teaching the construction of core prints, core boxes, etc. Patterns for machines under construction. Cabinet work, and furniture construction, as chairs, desks, bookcases, hall-stands, etc.

For description of equipment, see page 79.

CHEMICAL DEPARTMENT

Professor Hardin, Director.

Chemistry and Metallurgy

Professor Hardin.

Associate Professor Brackett.

Assistant Professor Shiver.

Assistant Professor Henry.

*Assistant Freeman.**

300. *General Chemistry*

SOPHOMORE CLASS; ALL COURSES.

In organic chemistry and the leading facts and principles of organic chemistry. First term, non-metals; second term, metals; third term, organic chemistry.

Text-book: Roscoe's Elementary Chemistry.

301. *Chemical Laboratory*

SOPHOMORE CLASS; ALL COURSES.

Introductory work and qualitative analysis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. *Industrial Chemistry*

JUNIOR CLASS; COURSES I, II, III.

The applications of chemistry in the more important arts and manufactures. Among the subjects studied are: Sulphuric acid; soda; chlorine; potash salts; fertilizers; lime, mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. *Chemical Laboratory*

JUNIOR CLASS; COURSES I, IA, II, III, VI.

Qualitative and quantitative analysis. A short course in assaying is given in the agricultural courses, and a fuller course in assaying in the metallurgical course.

Books used: Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Notes on Assaying.

304. *Agricultural Chemistry*

SENIOR CLASS; COURSES I, IA, II.

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the com-

*Acting Instructor.

position and manufacture of fertilizers, the composition of feeding stuffs and dairy products.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman.

305. *Chemical Laboratory*

SENIOR CLASS; COURSES I, IA, II.

Quantitative analysis of fertilizers, soils, ashes of plants, water, cattle-foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing methods of analysis adopted by the Association of Official Agricultural Chemists.

306. *Physical Chemistry; History of Chemistry*

SENIOR CLASS; COURSE III.

Text-books: VanDeventer's Physical Chemistry; Venable's History of Chemistry.

310. *Metallurgy*

SENIOR CLASS; COURSE III.

Text-book: Sexton's Elementary Text-Book of Metallurgy.

311. *Chemical and Metallurgical Laboratory*

SENIOR CLASS; COURSE III.

For description of buildings and equipment, see page 80.

DEPARTMENT OF TEXTILE INDUSTRY

Professor Doggett, Director.

Details of Instruction

In carding and spinning, after the subject of raw material has been completed, machinery and processes used in the production of cotton yarns will be taken up systematically, going into a detailed examination and explanation of the separate machines and the mechanisms peculiar to them. Calculations for making changes of gears, speeds, production, etc., and practical operation of each machine will be required.

In designing, instruction begins with explanations of the principles of representing weaves on design paper, after which the designing of plain, simple weaves, laying out of harness drafts, pegging plans, etc., are taken up, advancing into the designing of more complicated weaves usually made on harness. After the completion of harness weaves the time will be devoted to designing of Jacquard weaves and tying up of Jacquards. The aim of the instruction in designing will be to develop originality in the student.

The practical work in weaving is laid out to parallel the instruction in designing. The first part of the instruction in this work will be on hand looms. After the completion of that amount of work required on hand looms, the student is advanced to plain and fancy power looms, where, in addition to the practical operation of weaving, the loom will be analyzed and explained in detail, together with timing and setting all working parts. The latter part of this work will be on Jacquards.

Cloth analysis consists in dissecting samples of various kinds of cloth to ascertain the weave, texture, weight per yard, and the counts of yarn used in its construction. The students are required to reproduce some of these patterns on the looms of the school.

The work in textile chemistry and dyeing covers inorganic quantitative analysis; the general principles of organic chemistry, with special reference to the coloring matters; the preparation of mordants and dyes, and the application of them to the several textile fibres.

Mill construction, ventilation and fire protection will be discussed. Also the organization and relations of the various departments of an industrial establishment, the determination of costs of production and of the effect on costs of different systems of distributing indirect expenses. As occasion offers, addresses will be given by men of prominence who are interested in the cotton industry or in the manufacture of mill machinery.

Care is taken to develop accuracy in observation, neatness and clearness in written reports; and to this end each student is required to submit a comprehensive report—including the necessary notes and references from standard works on the subjects—of every experiment performed by him. By this method each student is able to verify for

himself in the laboratory, the truth of the principle stated to him in the classroom.

Each student will be required to submit an organization and a list of the machinery equipment, for several different sizes of mills, making different classes of products.

In all the divisions of this department the lecture work, so far as is necessary, will be illustrated with drawings and lantern slides.

Carding and Spinning

Assistant Professor Earle, D. E.

400. *Raw Material; Cotton Grading*

JUNIOR CLASS; COURSE VI.

That the manipulation of cotton fibres may be carried out successfully, under various conditions, it is essential that the characteristics peculiar to the cotton fibre should be understood. Therefore, the introductory work of the students of this department is to examine the physical properties of cotton fibres, to ascertain their grade, lengths of staple, spinning qualities, color, harshness and softness, and to determine their suitability for making various kinds of yarns, filling, warp, ply yarns, etc. This study of fibres will not be limited to American cottons, but will include the more important commercial cottons of the world. The effects of temperature and humidity on fibres will be fully discussed. Also the handling of cotton prior to manufacturing processes, together with the injury to cotton fibres therefrom.

401. *Opening and Mixing*

JUNIOR CLASS; COURSE VI.

Beneficial effects of opening and airing cotton; length of time to air for best results; effects on resultant yarn if not properly opened; necessity of mixing; when to mix cottons and methods of carrying out same; effects of improper mixing; effects of a judicious mixing on the after processes of manufacture; reasons for blending; effects of blending cottons on the resultant yarn, for strength, appearance, cost, etc.; effects on finished products if cottons are not properly mixed or blended.

402. *Picker Room*

JUNIOR CLASS; COURSE VI.

Proper situation of picker room; arrangement of machinery in same; automatic feeder; purpose for which used; construction, adjustment of parts, etc.; action on cotton; manner of connecting them to breaker lappers with and without dust trunks; advantages of dust trunk; facilitating good results by proper care; breaker lapper, use, explanation of parts, beaters used, adjustment of working parts and experimenting with different speeds of beater; intermediate and finisher lappers, necessity of using same, construction, speeds, care of beaters, kinds of beaters, speeds of beater for different lengths of

staple; evener motion and its control of feed rolls; adjustment of grids to regulate amount of waste, disposition of waste; regulation of air current; effects of air current on proper working of the lapper; lap formation; calculation on above machines for drafts, length of lap, etc.

403. *Carding*

JUNIOR CLASS; COURSE VI.

Purpose of carding; principle upon which cards are built; comparison of types of cards; explanation of purpose and construction of feed plate, licker-in, cylinder, flats, screens, doffer, coiler head, etc., different settings of cards to produce best results on different lengths and qualities of fibre; regulation of waste; amount of draft; grinding; effects of improper grinding on card clothing and fibre; calculations for changing gears and speeds of various working parts.

404. *Railway Heads and Drawing Frames*

JUNIOR CLASS; COURSE VI.

Purpose, use, construction, advantages and disadvantages of railway heads; explanation of stop motions, evener; principle of drawing slivers; purpose of drawing frame; comparing work of leather-covered and metallic rolls; adjustment of rolls; distribution of draft between the rolls; speeds, stop motions; all calculations on above machines, drafts, production, etc.

405. *Fly Frames*

SENIOR CLASS; COURSE VI.

Slubber, intermediate, fine roving and jack frames; construction, care and operation of the modern fly frame; bobbin and flyer lead machines; advantages of the bobbin lead; detailed explanation of working parts, differential motion, horse head, builder, full bobbin stop motion, etc.; adjustment of drawing rolls; calculations for draft, twist, lay, tension and other gears.

406. *Yarn Manipulation*

SENIOR CLASS; COURSE VI.

In this branch of work is included twisting; reeling; bundling; spooling; beaming. The slasher, construction and use; necessity for sizing; creels, cylinders, size boxes, etc.; mixing of size; different sizing ingredients for special purposes; method of preparing warps for the slasher; various calculations regarding each of the above processes.

407. *Combing*

SENIOR CLASS; COURSE VI.

Sliver lap machine, its construction, use, etc.; care and operation; leather-covered rolls; metallic rolls; ribbon lap machine, its construction, use, etc.; advantages of using same; care and operation; lap formation; combing machine, its use, care and operation; detailed

explanation of working parts, cylinder, half laps, segments, detaching rolls, etc.; with rules for adjusting and timing same; regulation of waste made; necessity of the process; relation of the process to fine smooth yarns; practical experience in adjusting above machines; calculations for change gears, etc.

408. *Spinning Frames*

SENIOR CLASS; COURSE VI.

Construction of the modern ring spinning frames; purpose of ring spinning; discussion of its principal parts; rings and ring-holders; various types of spindles in use; speed of spindles; weights, sizes and speeds of travellers; warp, filling and combination builder motions; speeds and settings of rolls for different lengths of staple; effects of twist on the strength, color and elasticity of yarns; calculations for draft, twist, production and various constants.

409. *Spinning Mules*

SENIOR CLASS; COURSE VI.

Construction and operation of the self-acting spinning mule; special features; description of the head stock; cam shaft, copping rail, nosing motion, easing motion, jacking motion, twisting at the head, etc.; different movements in the mule and timing of the same; formation of a cop; characteristics and uses of mule spun yarn; calculations for draft, twist, builder, gear, etc.

Text and Reference Books: Nasmith's Student Cotton Spinner; Tompkins' Cotton Mill Processes and Calculations; Taggart's Cotton Spinning; Monie's Sizing and Sizing Compounds.

For description of equipment, see page 83.

Weaving and Designing

Assistant Professor McSwain.

410. *Hand Loom Weaving*

JUNIOR CLASS; COURSE VI.

The first practical work in weaving is on the hand loom. These hand looms have 4x4 box motion and 30 harness dobbies. After the design and necessary calculations have been made the student proceeds with dressing, drawing-in, reeding, tying the warp in loom, building harness chain and starting up loom; producing different weave effects from the same drawing-in draft by changing the harness chain; using box motions for color effects; combining two or more systems of filling with one system of warp, two or more systems of warp with one system of filling, two or more systems of warp with two or more systems of filling to produce figured fabrics of a special character; explanation of the different methods used in raising and lowering the harness.

411. *Power Loom Weaving*

JUNIOR AND SENIOR CLASSES; COURSE VI.

Power loom weaving will be taken up after the student has finished the required amount of hand loom work, and will include a study of the plain or cam loom; cam motions used for raising and lowering the harness, such as the under cam, side cam, etc.; setting cams; sketching cams to produce a given motion; arrangement of strapping for two, three, four and five harness; timing cams to suit the number of harness used; speed of different width looms on the same class of fabrics; selection of temples and measurements for same; Draper loom; warp stop motion, filling change mechanism, etc.; the dobby analyzed and explained; methods of shedding; head motions; harness chains for single and double index dobbies; chains for head motions; explanation of box motions, four by one, four by four box, etc.; building box motion chains; explanation of multipliers used on box motions and harness motions; let-off motions, Morton, Bartlett, Shepard, and friction let-offs; open and closed shed machines explained; single and double index dobbies, etc.

412. *Designing*

JUNIOR AND SENIOR CLASSES; COURSE VI.

Purpose of designing, explanation of "warp" and "filling;" representing weaves on design paper; foundation weaves; plain or cotton weaves; weaves derived from plain weaves, such as rib and basket weaves; twill weaves and methods of construction; derivative weave from twills, such as broken, steep, skip, reclining and curved twills; corkscrew twills, entwining twills; satin weave and the purpose of same; weaves derived from satins, such as double satins and granites; shading of satins; figured effects produced by using warp and filling satins; color effects produced by using two or more colors in the above fabrics; methods of constructing granite weaves; points to be considered in combination weaves; special weaves; honeycombs, gauze and imitation gauze, bedford cord, plain and fancy piques, matelasses, etc.; two systems of warp and one system of filling, or two systems of filling and one system of warp for the purpose of figuring; explanation of double cloth, purposes, and class of fabrics in which generally used; representing double cloth weave on design paper; use of different proportions of "back" and "face" for special effects; methods of stitching double cloth so that the stitching will produce a figuring effect; stitching so that it will not show either on "face" or "back" of cloth; leno weaves and method of representing on design paper; methods of making drawing-in drafts, plain and fancy drafts, point, skip, mixed or cross draws; chain drafts; rules for finding the number of heddles required for each harness; methods used in reducing weaves to the lowest number of harness.

413. *Jacquard Designing*

SENIOR CLASS; COURSE VI.

Explanation of the various Jacquard machines; methods of shedding, such as the rise and drop, single lift, double lift machines; single

and double cylinder machine; open and closed shed machine; drawing of tie-ups, straight tie-up, both in French and English system, point tie-up, combination tie-up for special goods, as table damask, Marseilles quilts, etc.; practical operation of tying-up a Jacquard, cutting leaches, threading of comber board, tying on and leveling up mail eyes; figuring comber board for a given texture of goods; casting out hooks to reduce texture of goods without retying the harness, cutting and lacing cards for a given design; selection of design paper for different fabrics, with regard to picks and ends per inch used; methods used in laying out the figure for a Jacquard design; enlarging the sketch for design paper. Instruction will also be given in the principles of special weaves, such as swivel weaving, lappet weaving, chenille and pile fabrics as used for rugs, carpets, etc. The harmony and contrast of colors will also be discussed.

414. *Cloth Analysis*

SENIOR CLASS; COURSE VI.

Methods of arranging cloth sample for analysis; figuring the counts of cotton, woolen, worsted, and silk yarns; calculations for converting one system of yarn into that of another; finding the weight of cloth per yard and the counts of yarn used in its construction from the analysis; figuring width of warp in reed and number of reed to use to produce a given width and texture when woven; calculations to determine the cost of producing a fabric having given values of material, labor, counts, picks and ends per inch, weight per yard, etc.

This work takes up all representative classes of weaves that can be woven on harness, and gives the student a thorough knowledge of figuring yarns, weight of cloth, ends and picks per inch, etc.

Reference Books: Ivey's Loom Fixing; Fox's Mechanism of Weaving; Posselt's Technology of Textile Designs; Holmes' Cotton Cloth designing.

For description of equipment, see page 85.

Textile Chemistry and Dyeing

Professor Doggett.

420. *Textile Chemistry*

JUNIOR CLASS; COURSE VI.

To the qualitative and quantitative analysis of the general course is added a course of lectures in inorganic chemistry especially relating to the materials used in the various textile processes of mordanting, fixing, scouring, bleaching, etc. Also lectures on organic chemistry, taking up as much of the aliphatic series as is necessary for an understanding of the chemical reactions involved in the application of these compounds to textile operations, and to prepare the student for the study of the aromatic compounds. Toward the end of the year the discussion of the simpler aromatic compounds is begun as an introduction to the special work on synthetic dyestuffs in the senior year.

The laboratory work will include the preparation of typical compounds of each class of derivatives taken up in the lectures.

421. *Dyeing*

SENIOR CLASS; COURSE VI.

A course of lectures is given which covers that portion of the aromatic series which has reference to the study of the principal synthetic dyestuffs. The laboratory work consists of the preparation of certain typical dyestuffs and the study of their reactions. A complete written report of each experiment is required of the student, and written reviews are given each month on the subjects covered in the lectures and laboratory work. The purpose of the course is to give the student an understanding of the chemistry of the operations by which coal tar products are separated, purified and converted into dyestuffs.

A course of lectures is also given on the application of the different classes of dyestuffs to the various fibres, together with the chemical and physical properties of the latter; bleaching and mercerizing of cotton yarns and cloth; scouring and bleaching of wool; the manufacture of artificial silk; calico printing, etc. In the laboratory the dyeing of cotton and wool is carried on in an experimental way, a study being made of typical dyestuffs of each of the principal classes. In the dye-house the dyeing of larger quantities of cotton and wool is carried on, as well as the bleaching and mercerizing of cotton, scouring and bleaching of wool, and the printing of calico.

The student is required to make a written report of each experiment performed, accompanied by samples of the dye material, which have been subjected to the action of various agencies, such as light, acids, alkalies, etc.

The purpose of this training, taken in connection with the work preceding it, is to serve as an introduction to the work of the practical dyer, and to prepare the student for the position of chemist in textile establishments. The constant aim of the instruction is to point out the chemical reactions at the foundation of the above textile operations, so that the student going into practical work in the mills will have at his command scientific knowledge sufficient to enable him to study intelligently such problems as may come before him in his line of work.

Reference Books: Ritcher's Organic Chemistry; Bernthsen's Organic Chemistry; Holleman's Organic Chemistry; Allen's Commercial Organic Analysis; Heermann's Dyer's Materials; Schultz & Julius' Organic Coloring Matters; Georgievics' Chemical Technology of Textile Fibres; Georgievics' Chemistry of Dyestuffs; Kenecht, Rawson & Lowenthal's Manual of Dyeing; Beech's Dyeing of Cotton Fabrics; Hummel's Dyeing of Textile Fabrics; Frap's Principles of Dyeing.

For description of equipment, see page 86.

ACADEMIC DEPARTMENT

English

Professor Furman.

Associate Professor Daniel.

Assistant Professors Keitt, Bryan, Bradley.

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

500. *English Grammar and Word Studies*

PREPARATORY CLASS.

This class is carefully prepared for entry upon the work of this College, several of the professors in English having charge of its sections. The intention is to make the English course continuous, so that there may be no break between the preparatory and freshman work, either in teachers or text-books. The books used in preparatory class are Buehler's Grammar, Gilbert's Studies in Words, and such reading texts as may from time to time be selected by the instructors. Special attention is paid to spelling, definition of words, oral reading, and written exercises.

501. *English Grammar, Reading and Composition*

FRESHMAN CLASS; ALL COURSES.

A review of the subject of grammar introduces the work of this class. Constant drill is given in theme writing; pupils being expected to make use of the College library under direction of instructors. Methods of using dictionaries, encyclopædias, and other reference books are explained practically to the students. Full supplementary readings are required, and practice is given in the writing of abstracts of books so read.

Text-books: Emerson-Lockwood's lessons in English; Buehler's Practical Exercises in English; Webster's School Dictionary, and such English classics as may be assigned.

502. *Rhetoric, Composition, American Literature*

SOPHOMORE CLASS; ALL COURSES.

The study of rhetoric is pursued throughout the year. Constant theme writing is required. To supplement the work in composition, a brief course in American Literature is given, and parallel readings from authors are assigned.

The text-books are Espenshade's Composition and Rhetoric, and Painter's Introduction to American Literature. The parallel reading for 1907-1908 consisted of Franklin's Autobiography, Irving's Alham-

bra, Cooper's *Spy*, Dickens' *Tale of Two Cities*, Tennyson's *Shorter Poems*, Hawthorne's *Scarlet Letter*, Selections from the poems of Bryant, Poe, Longfellow, Holmes, Whittier, Lowell, Lanier and minor Southern poets.

503. *English Literature*

JUNIOR CLASS; ALL COURSES.

The work in the Junior class begins with the critical study of Macaulay as an essayist. This is followed by a general course in English literature. Pancoast's *English Literature* is the text-book—this work being supplemented by lectures. Monthly essays are required, and frequent oral readings, embracing selections from the principal English authors from Chaucer to the present time.

504. *Studies in Shakespeare*

SENIOR CLASS; ALL COURSES.

This class is given instruction in the principles of literary criticism. A somewhat full course in Shakespeare study is furnished. Several plays are read in class—the students being orally examined on all questions, grammatical, historical and ethical, which arise in the study of this author. Monthly essays are required.

History and Political Economy

Professor Morrison.

The course includes history of the United States, South Carolina history, general history, commercial geography, and political economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The classroom is supplied with globes, charts, maps and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College library.

The history of South Carolina and the history of the South receive special attention. "A people which takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

510. *United States History*

PREPARATORY CLASS.

Text-book: A School History of the United States, by White.

511. *South Carolina History*

FRESHMAN CLASS; ALL COURSES.

Text-book: Weber's History of South Carolina.

512. *Commercial Geography*

FRESHMAN CLASS; ALL COURSES.

Text-book: Olin's Commercial Geography.

513. General History

SOPHOMORE CLASS; COURSES III, IV, V, VI.

JUNIOR CLASS; COURSES I, IA, II.

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediæval and Modern History.

514. Civics

SOPHOMORE CLASS; COURSES III, IV, V, VI.

JUNIOR CLASS; COURSES I, IA, II.

Text-book: Clark's Government.

515. Political Economy

SENIOR CLASS; ALL COURSES.

Text-book: Gide's Principles of Political Economy, second American edition (1904).

Mathematics*Professor Brodie.**Associate Professor Martin.**Assistant Professors Houston, Shanklin, Hunter, Bramlett.*

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics. (See requirements for admission, page 26.)

520. Algebra

FRESHMAN CLASS; ALL COURSES.

Review of involution, evolution, theory of indices and quadratics; simple indeterminate equations; inequalities; proportion and variation; logarithms.

Text-book: Well's Text-book in Algebra.

521. Geometry

FRESHMAN CLASS; ALL COURSES.

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles. Plane and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume. Special attention is given to the formation, on the part of students, of the habit of clear and accurate reasoning and concise expression.

Text-book: Bush and Clarke's Geometry.

522. Trigonometry

SOPHOMORE CLASS; ALL COURSES.

Measurements of angles; trigonometric functions; right triangle; goniometry; relations between functions of one angle; functions of multiple angles; inverse functions; trigonometric equations; oblique triangles; De Moivre's theorem; spherical trigonometry; general

formulas; right spherical triangle; oblique spherical triangle; applications.

Text-book: Well's Plane and Spherical Trigonometry.

523. *Descriptive Geometry*

SOPHOMORE CLASS; COURSES III, IV, V, VI.

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; shades, shadows and perspective; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive Geometry.

524. *Higher Algebra*

SOPHOMORE CLASS; COURSES III, IV, V, VI.

Progressions; binomial theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-book in Algebra.

525. *Analytic Geometry*

SOPHOMORE CLASS; COURSES III, IV, V, VI.

JUNIOR CLASS; COURSES IV, V, VI.

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of second degree involving two variables; higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Tanner and Allen's Analytic Geometry.

526. *Differential Calculus*

JUNIOR CLASS; COURSES IV, V, VI.

Differentiation of algebraic functions; transcendental functions; successive differentiation and development of functions; functions of two variables; tangents and asymptotes; maxima and minima; radius of curvature; evolutes and involutes; envelopes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

527. *Integral Calculus*

JUNIOR CLASS; COURSES IV, V, VI.

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of two variables; lengths of curves; areas of plane curves; rectification of curves; cubature of volumes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

Civil Engineering

530. *Plane Surveying*

SOPHOMORE CLASS; ALL COURSES.

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the areas are computed and plats are drawn. Experience is given in problems of laying out and dividing up land, and in locating irregular boundaries. Practice is also had in section and differential leveling.

Text-book: Raymond's Plane Surveying.

531. *Higher Surveying*

JUNIOR CLASS; COURSE V.

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; geodetic surveying; map and plan drawing; topographical symbols, etc.

Text-book: Johnson's Surveying.

532. *Highway Engineering*

JUNIOR CLASS; COURSE V.

Location, construction and maintenance of country roads and city streets; advantages of various materials for road covering; effects of grades and surface upon the cost of transportation; plans and specifications; practical problems in change of grade and relocation from surveys of existing roads.

Text-book: Spalding's Roads, Streets and Pavements.

533. *Railway Engineering*

JUNIOR CLASS; COURSE V.

Preliminary and location surveys; location from contour map; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches, turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

Text-book: Webb's Railway Construction.

534. *Rural Engineering*

JUNIOR CLASS; COURSES I, II.

This course is arranged with special view to the needs of the agricultural students. Among the subjects taught are: Farm surveying; laying out and dividing up land; land drainage, including surface-drainage, under-drainage, and hillside ditching and terracing. Road engineering, a practical course in road-making and maintenance, with special reference to conditions in South Carolina. The principles underlying grade and surface resistance, drainage, surfacing, and the best methods of construction are carefully studied. The instruction

in the classroom is supplemented by a liberal amount of field practice.

Text-books: Gillespie's Manual of Road-Making; Elliott's Farm Drainage.

535. *Railway Engineering*

SENIOR CLASS; COURSE V.

Surveys are made for a line of railway a mile or more in length; the necessary plans, profiles and cross-sections are prepared; grades are determined, curves laid out, slope stakes set, and all the needed measurements made to enable the student to complete the excavations and embankments, and to estimate the cost of construction.

Text-book: Webb's Railway Construction.

536. *Structural Engineering*

SENIOR CLASS; COURSE V.

Building materials; mechanics of construction; derivation of practical formulas; masonry; foundations on land and in water; stability of walls and arches; analytical and graphical investigation of stresses in plate girders, Howe, Pratt, Warren and other types of highway and railroad bridges, and various forms of roof trusses; bridge design.

Text-books: Fiebeger's Civil Engineering; Merriman and Jacoby's Roofs and Bridges, Parts I and III.

537. *Hydraulic Engineering*

SENIOR CLASS; COURSE V.

Hydrostatics; efflux; resistance and work of liquids; motion of water in pipes and open channels; derivation of practical formulas; hydrostatic and hydraulic machinery; determination of discharge of stream; head and available power; form and dimensions of pond or reservoir; detailed topography of dam site; determination of form and dimensions for stability of dams; preparation of plans and specifications; lectures on water-supply engineering.

Text and Reference Books: Merriman's Hydraulics; Frizel's Water-Power; Wegmann's Construction of Dams; Folwell's Water Supply Engineering.

For description of equipment, see page 87.

Modern Languages

Professor Doggett.

The courses in German and French are designed to give the student general training and culture and to enable him to make use of the languages as an instrument in scientific research.

The course in French is now being arranged.

540. *German*

JUNIOR CLASS; COURSES I, IA, II, VI.

The essentials of German grammar; collateral reading; translation of easy German prose; prose composition.

541. *German*

SENIOR CLASS; COURSES I, IA, II, VI.

German syntax; study of German idioms and prefixes; composition based on a text; translation of literary and scientific German prose and of easy poetry; translation at sight from German current literature and scientific periodicals.

Text-books: Thomas' Practical German Grammar and Hervey's Supplementary Exercises; Geibler's Deutsche Sagen; Goethe's Die neue Melusine; Zschokke's Der tote Gast, or similar texts; Wait's German Science Reader; one of Schiller's plays.

Reference Books: Curme's Grammar of the German Language; Blackwell's German Prefixes and Suffixes; Eberhard-Lyon's Synonymisches Handwörterbuch; Heath's German Dictionary.

MILITARY DEPARTMENT

*Captain Minus, U. S. Army, Director.
Commandant of Cadets.*

Military Science and Tactics

Captain Minus.

The course in military instruction, as prescribed and followed, is both theoretical and practical.

600. *Tactics and Elements of Military Science*

JUNIOR CLASS; ALL COURSES.

The theoretical instruction, given by recitations and lectures, includes the following, as prescribed by the War Department: The Infantry Drill Regulations, including the School of the Battalion in both close and extended order; the Manual of Guard Duty.

601. *Military Science*

SENIOR CLASS; ALL COURSES.

Small-Arms Firing Regulations; the Articles of War, with special reference to Articles 4, 8, 15, 20, 21, 22, 23, 24, 32, 38, 39, 40, 42, 44, 46, 47, 50, 55, 57, 61 and 65. Also the following records: Enlistment and discharge papers including descriptive lists; morning reports; field and monthly returns; muster rolls; rosters; ration returns; requisitions; property returns.

In addition, ten lectures are given each year upon the following subjects: Two lectures on the organization of the United States army; one lecture on patrols and outposts; one lecture on marches; one lecture on camps and camp hygiene; three lectures on lines and bases of operations; two lectures on the attack and defense of advance and rear guards, and outposts and convoys.

The articles of war specifically mentioned are among the most important for the young officer to know on first entering service. The records for study should be thoroughly understood by all graduating cadets, because they show how the soldier enters and leaves the service; how he is accounted for, paid, fed, clothed, armed; and how his military duties are regulated.

602. *Military Drill*

REQUIRED OF ALL CADETS.

Drill regulations, including the school of the battalion through close and extended order; advance and rear guards and outposts; marches; the ceremonies of battalion review, inspection, parades, guard mounting, and escort of the colors; infantry target practice; instruction in first aid to the injured; guard duty.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

ORGANIZATION AND MODE OF
GOVERNMENT
GENERAL INFORMATION



ORGANIZATION AND MODE OF GOVERNMENT

The following extracts from the book of "Regulations" explain the organization and mode of government of the corps:

Organization

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothings, equipments, etc., shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc., of the cadets at least once each week, and make a report thereon to the President."

"3. For instruction in tactics and for military police and discipline the corps of cadets will be organized into one or more battalions of two or more companies each, and a band when practicable. In case the number of the cadets will permit of the formation of two or more battalions, the organization will be regimental."

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have

been most studious and soldier-like in the performance of their duties and most exemplary in their general deportment. As a rule, the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

"5. The field and staff shall consist of two cadet majors, two cadet lieutenants and adjutants, one cadet captain and adjutant, one cadet captain and quartermaster. The non-commissioned staff shall consist of one regimental sergeant-major, one regimental quartermaster-sergeant, two battalion sergeant-majors, and one regimental color-sergeant."

"6. In each company there shall be one captain, two lieutenants, one first sergeant, one company quartermaster-sergeant, and as many sergeants and corporals as may be required."

"7. Each of the battalions will be commanded, when on drill, and at such other times as the Commandant of Cadets shall direct, by its cadet major.

"8. On the graduation of every class the Commandant of Cadets shall obtain the names of such cadets as shall have shown special aptitude for military service, and furnish a list thereof to the Adjutant-General of the State for his information. A copy of this list will also be sent to the Adjutant-General of the United States army, and the names of the three most distinguished students in military science and tactics will, when graduated, be inserted in the United States Army Register."

Leave of Absence

Communications from parents, requesting leave of absence from the College for their sons, must be addressed directly to the President, and not through the cadets.

The rules governing in cases of permits to visit home during the session of the College require that cadets who have accumulated more than eight demerits in any one term, and who have fallen below grade two in their studies on any report, will not be allowed to leave College during the term except in cases of extreme sickness or death in the family.

No leave of absence or honorable discharge will be granted after May 1st, except for serious causes.

A student who has been granted leave of absence and who stays over the date allowed, unless for sickness or other good and valid reason, will lose his place in the College and will be required to file a new application for admission and to pay the matriculation fee of \$5 again before being allowed to re-enter. In case of sickness, a certificate from the attending physician must be submitted.

General Regulations

In addition to the special regulations of the military department, a copy of which is given each cadet, the following general regulations are enforced:

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks except those who live with their parents or relatives near enough to attend from their homes.

Each student is required to purchase the prescribed uniform; also a pair of overshoes and a waterproof coat. Students may provide themselves with such work-clothes as they desire.

Those occupying a room are consulted before another student is assigned to that room. A student not satisfied with his roommate has the privilege of applying for permission to move to another room, and such applications are granted when practicable.

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

The practice known as "hazing" is positively forbidden. All cadets, upon matriculation, shall be required to sign a pledge not to indulge in hazing or injuring in any form the person of any cadet or give countenance or encouragement thereto while a member of the corps of cadets. Any cadet indulging in this practice will be dismissed from the College.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

If any cadet shall consider himself wronged by another, or by an officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

Cadets are forbidden to keep any firearms or other weapons in their possession not issued by the proper authority.

Any cadet receiving 66 demerits during a College term shall be brought before the Discipline Committee and shall be dismissed, or less severely punished.

Any cadet who leaves barracks without authority between retreat and reveille shall be dismissed.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Cadets who receive no demerits during any calendar month will be given a credit of eight, to be applied in removing any demerits they may have had charged against them during any preceding months of that term.

Religious Exercises

Chapel Services.—There is preaching in Memorial Hall every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by the President and members of the Faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday school, at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ, as their divine Lord and Savior; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and daily chapel exercises. These activities include: a religious service on Sunday evening, a mid-week prayer-meeting on Thursday evening, a daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

The Bible department offers four courses of study; two on the life of Christ; one, studies in the life of St. Paul; and the fourth a study in the Old Testament. These classes meet on Sunday evening and are led by students; these student leaders are prepared for this work through training classes led by members of the Faculty, the local ministers and the general secretary. During the past year 450 cadets were enrolled in 47 of these group classes. This department also conducts Bible institutes and special training conferences. A week's series of Bible lectures, delivered by some recognized biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervision of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. The ten students who have declared it to be their purpose to go to the foreign field have been organized into a working band. A small, but select, library is kept in the office of the general secretary, where it is always accessible to the members.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts, can not be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the college, either as a disciplinarian or instructor; neither is he a College preacher. But he is an older and more experienced student employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. His office is in Room 84, old barracks, where he will be glad to meet all students.

Parents and students desiring further information should write to the general secretary at the College, or to the president, Cadet J. C. Pridmore.

Care of the Sick

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

Parents will be kept fully informed of the condition of sick students. The Surgeon, however, can not undertake to

notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. Parents may always rest assured that they will be promptly notified of sickness of any consequence; and in case of serious illness the Surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and, when practicable, students are employed in this work, and are paid at the rate of eight cents an hour. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbia and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly, on Saturday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small fee is charged for initiation, and there are also monthly dues of a few cents to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman University, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications by the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An annual, an illustrated volume, is published under the auspices of the senior class.

There is also *The Tiger*, published bi-weekly, which is devoted largely to athletics.

Science Club

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the Faculty and advanced students of the College.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1097-1908 the following lectures and concerts were given:

1. Dr. R. S. McArthur.....October 16
2. Commonwealth Ladies' Orchestra.....November 16
3. F. W. Ruckstuhl.....November 30
4. Lyceum Grand Concert Company.....January 7
5. Whitney Brothers Quartette.....January 18
6. Edward Baxter Perry.....February 8
7. Prof. S. H. Clark.....February 26
8. Broomel-Reed Concert Company.....March 14
9. John Thomas Concert Company.....April 4

Cadet Exchange

A Cadet Exchange is maintained, where students may purchase at wholesale prices necessary articles, such as books, stationery, collars, cuffs, underwear, etc.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.), and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.).

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an Athletic Council, consisting of members of the Faculty and of the student-body. This council consists of nine members—two members of the Faculty, the president and secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty, chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. *Monthly Standing.*—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. *Sessional Standing.*—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the next college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. *Student Taking Class Over.*—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play, unless he passes in the first and second terms without any failures, and is otherwise eligible.

4. *Graduate Students.*—No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work; that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. *Irregular or Special Student.*—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Com-

mittee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

Field Day.—May 1st is observed as a holiday for contests in track and field athletics, such as running, hurdling, high and broad jumping, pole-vaulting, hammer-throwing, putting the shot, etc., and is known as “Field Day.”

Donations

William P. White.—Flag staff, with following inscription:

This Staff sawed out of the heart of a Palmetto Tree, cut upon one of the Sea Islands adjacent to Beaufort and Port Royal, and fashioned by me into a Flag Staff, is considered as an appropriate Staff for a State Company Banner, being from a historic and emblematic tree of the Coat of Arms of South Carolina, is presented to the Corps of Cadets of Clemson College by Mr. William P. White, my grandson, now a student of Clemson, of the Senior Class of 1905-1906, and who, in my behalf and in his own, will make the appropriate presentation.

Beaufort, S. C., Sept. 19, 1905.

THOMAS G. WHITE.

MECHANICAL DEPARTMENT.

Keuffel & Esser Company, New York.—One 80-inch slide rule.

Lunkenheimer Company, Cincinnati, Ohio.—Sections of valves and injector.

The Continental Iron Works, New York.—Section model of internal furnace boiler.

Mica Insulator Company, New York.—Mounted samples of micanite.

Electric Storage Battery Company.—Mounted storage battery plates.

R. Thomas' Sons Company.—Samples of high voltage insulators.

Xylotite Manufacturing Company.—Two xylotite pulleys.

TEXTILE DEPARTMENT.

The A. T. Atherton Machine Company, Pawtucket, R. I.—One automatic feeder; one finisher lapper; one lot lap-rods; half-value on breaker lapper.

Saco & Pettee Machine Company, Newton Upper Falls, Mass.—One 40-inch revolving top flat card; one Entwistle traverse grinder; one Entwistle drum grinder; one bur-nisher; one set carder's tools; one improved railway head, with back, front and full can-stop motion; one four delivery draw frame, with back, front and full can-stop motion, fitted with single preventer rolls; one 40-spindle slubber; one 60-spindle intermediate roving frame; one 80-spindle fine roving frame; one 128-spindle combination warp and filling ring spinning frame; one 72-spindle improved spooler. A sufficient number of gears were sent with these machines to make various changes that may be necessary.

Mason Machine Works, Taunton, Mass.—One 40-inch revolving top flat card; one Entwistle drum grinder; one stripper brush; one set carder's tools; one railway head, with back, front and full can-stop motion; one four delivery draw frame, with back, front and full can-stop motion, fitted with single preventer roll; one 112-spindle combination warp and filling ring spinning frame; one 40-inch plain loom; one 36-inch fancy cotton loom; one 36-inch 24-harness dobby loom; half value on combing machinery. All necessary gears with these machines to make the required changes.

The D. A. Tompkins Company, Charlotte, N. C.—One adjustable reel; one draw-in frame; one loom box; one doffer box; two section beams; one switchboard, complete; one emery wheel and stand; one band machine; one saw-tooth model gin; one spike-tooth model gin.

Draper Company, Hopedale, Mass.—One 40-inch Northrop loom; one 28-inch Northrop loom; one 48-spindle combination wet and dry twister; one 40-spindle spooler; one section warper; one ball warper; one Rhodes' banding machine, with Watt's patent marking device; section beams; temples as required; loom findings.

Crompton & Knowles Loom Works, Providence, R. I.—Half value on following: One 32-inch loom, with 416-hook Jacquard; one 32-inch loom, with leno attachment; one 65-inch 4 by 1 box loom, with 624-hook Jacquard; one 36-inch Knowles "Gem" loom; one 36-inch fancy cotton towel loom; one 30-inch Knowles fancy cotton loom, with 16-harness dobby; two 16-harness dobbies.

Universal Winding Company, Boston, Mass.—One six-spindle cone and tube winder.

Woonsocket Machine and Press Company, Woonsocket, R. I.—Half value on one 96-spindle jack roving frame.

T. C. Entwistle, Lowell, Mass.—Half value on one beaming frame.

Fales & Jenks Machine Company, Pawtucket, R. I.—Two combination warp and filling spinning frames, 80 spindles each; one wet twister, combined filling and taper top wind, 70 spindles; half value on twister like above, all necessary gears, etc.

T. B. Woods' Sons, Chambersburg, Pa.—One-fourth value on equipment of shafting, hangers and pulleys used in new extension of building.

Jones & Laughlin Company, Limited, Pittsburg, Pa.—The entire original equipment of shafting, hangers and pulleys.

Whitin Machine Works, Whitinsville, Mass.—Half value on following: One 40-inch cam loom; one 40-inch loom, with 20-harness dobby; one 30-inch duck loom; two combination warp and filling ring spinning frames, 80 spindles each; all gears, etc.

Schaum & Uhlinger, Philadelphia, Pa.—One top engine drive, self-balancing, hydro-extractor.

The Metallic Drawing Roll Company, Indian Orchard, Mass.—Metallic drawing rolls for railway heads and draw frames as required.

Westinghouse Electric Company, East Pittsburg, Pa.—One 22 K. W. 220-volt direct-current motor.

The American Moistening Company, Boston, Mass.—Complete system of "Vortex" humidifiers, including pump, tank and connections.

Beattie Machine Works, Cohoes, N. Y.—One single elastic-stitch looper.

E. Jenckes Manufacturing Company, Pawtucket, R. I.—One "Invincible" seamless hosiery knitting machine.

W. W. Altemus & Son, Philadelphia, Pa.—One bobbin winder.

New Bedford Paper Company, New Bedford, Mass.—Cops, cones, tubes, etc., as required.

Charlotte Supply Company, Charlotte, N. C.—All belting, as required.

American Supply Company, Providence, R. I.—Heddles, heddle frames, reeds and loom supplies as required.

Loom Picker Company, Biddeford, Me.—Loom supplies.

The Emmons Loom Harness Company.—Cotton harness, reeds and loom supplies.

Roney & Rae Company, Woonsocket, R. I.—Twelve bobbin holders.

Steel Heddle Manufacturing Company, Philadelphia, Pa.—2,500 patented flat steel heddles.

R. A. Blythe, Philadelphia, Pa.—One lot mercerized yarns.

Barber & Coleman, Boston, Mass.—One Barber knotter.

National Ring Traveller Company, Providence, R. I.—One lot of spinning and twister travellers.

DeHaven Manufacturing Company, Brooklyn, N. Y.—One lot of spinning and twister travellers.

Victor Shaw Ring Traveller Company, Providence, R. I.—One lot spinning travellers.

Morley Button Manufacturing Company, Boston, Mass.—One lot spinning travellers.

Sykes & Street, New York, N. Y.—Collection of dye stuffs.

New York and Boston Dyewood Company, New York, N. Y.—Collection of dye stuffs.

Victor G. Bloede & Company, Baltimore, Md.—Collection of dye stuffs and mordants.

Cassella Color Company, New York, N. Y.—Large collection of dye stuffs.

Kuttroff, Pickardt & Company, New York, N. Y.—Collection of dye stuffs.

Farbenfabriken of Elberfeld Company, New York, N. Y.—Large collection of dye stuffs, over 300 samples.

H. A. Metz & Company, New York, N. Y.—Large collection of dye stuffs.

Grasselli Chemical Company, New York, N. Y.—Chemicals used in dyeing.

Schoellkopf, Hartford & Hanna & Company, Buffalo, N. Y.—Large collection of dye stuffs.

Roessler & Hasslacher Chemical Company, New York, N. Y.—Sodium peroxide, for bleaching demonstrations.

Berlin Aniline Works, New York, N. Y.—Collection of dye stuffs.

Charles J. Fox, Philadelphia, Pa.—50 pounds textile soaps.

Kalle & Company, New York, N. Y.—Collection of dye stuffs

A Klipstein & Company, New York, N. Y.—Collection of dye stuffs.

Woonsocket Reed and Shuttle Works.—Four self-threading shuttles.

Southern Railway Company.—Half freight rates over their lines on entire original equipment of machinery.

Donations to the Library

Since the publication of the last Catalogue, the Library has received gifts from the following:

Studies in Plant and Organic Chemistry—Frances R. Abbott.

Geographen Kalender—Dr. P. H. Mell.

How They Kept the Faith—Mrs. B. S. Gantt.

Chili of Today—William S. Meyers.

Clemson College Chronicle, 1905-1906—Chronicle Staff.

Clemson College Chronicle, 1906-1907—Chronicle Staff.

Calhoun Text-Book—Dr. P. H. Mell.

PAPERS.

The Prairie Farmer, The Practical Farmer, The Progressive Farmer, The Southern Farmer, Southern Farm Gazette, National Farmer and Stock Grower, American Agriculturist, Four-Trade News, Greenville Daily News, Anderson Daily Mail, Athens Banner, Abbeville Press and Banner, Our Monthly, The Baptist Press, Wool and Cotton Reporter, The Beaufort Gazette, Darlington Press, The Clinton Chronicle, Calhoun Advance, The Rock Hill Herald, Times and Democrat, Golden Age, The Daily Item, The Barnwell Sentinel, Oconee News, The Press and Standard, The Field, The Anderson Intelligencer, American Economist, Cornell Countryman.

NOTE.—A special book is kept in which the record of every donation is preserved, and a special label, stating the name of the donor, is placed in each volume presented.

Donations to the Textile Museum

One reel, made by John Verner, a Revolutionary soldier; loaned by Miss Mary R. Shelor, Westminster, S. C.

One hand loom, loaned by Dr. W. B. Noffz, Cross Hill, S. C.

Samples ticking, from the Lexington Manufacturing Company, Lexington, S. C.

One copy of "The Cotton Gin—The History of Its Invention," by D. A. Tompkins. Presented by the author.

Seven hundred mounted cloth samples, from Marshall Field & Company, Chicago, Ill. Complete set of samples of cloth in demand in the Chinese market, showing defects of American goods, from United States Department of Commerce and Labor.

Experiment Station and Inspection Work

Clemson College is not only engaged in providing courses of instruction for the youths of the State, but under the laws of South Carolina it is conducting work of great importance to the farmers, fruit growers, and people engaged in animal industry. There are four departments of experimentation and inspection inaugurated by the Board of Trustees:

1. Experiments in Agriculture (State Experiment Station).
2. Inspection of Fertilizers.
3. Veterinary Inspection.
4. Entomological Inspection.

The Experimental Station is devoted to experiments in subjects relating to the chemical composition of plants and soils; rotation experiments; plant breeding; study of forage plants for hay and pasturage; plant diseases; diseases of animals, such as tuberculosis, Texas fever, glanders; feeding of pigs; general dairy experiments; insects injurious and beneficial to plants; studies of varieties of fruits; methods of pruning grape vines, etc.

Bulletins giving the results of these experiments are published at intervals during the year, and are mailed free to every one who applies for them.

Although the Station was established for the benefit of the farmers, students of the College profit by the experiments in connection with the regular courses of study.

The second division, viz.: the inspection of fertilizers, is conducted by the Board of Trustees for the protection of the farmers in the State against the introduction of fraudulent brands of fertilizers. The inspectors are appointed by the Board of Trustees, and the entire work of issuing tags, the analysis of samples and the enforcement of the law, is in the hands of the Board of Trustees of Clemson College. After paying the expenses required for conducting this inspection, all the surplus money is turned over to the College for running expenses and equipment.

On the 19th of February, 1901, the General Assembly passed an Act empowering the Board of Trustees of Clemson College to promulgate and enforce rules and regulations for the guidance of the Veterinarian of the College for the treatment or destruction of animals affected with contagious diseases, and to prescribe the powers of the Veterinarian whenever such diseases appear in any part of the State. Under this law the Veterinarian, upon receipt of a notice from two citizens, is authorized to investigate outbreaks of infectious or contagious diseases among domestic animals and to apply such measures as are necessary to protect the public from injury from the same.

The Entomologist is required by the State law to inspect all nursery stock coming into the State and to prevent the ravages of insects as far as possible.

On the 19th of February, 1901, the General Assembly passed an Act requiring the Board of Trustees of Clemson College to designate three of their number, to be known as the State Board of Entomology. To the said board was given all power to adopt rules and regulations

governing the inspection relative to the sale and transportation of trees, plants, shrubs, cuttings, buds, vines, bulbs, or roots that they may deem advisable in order to prevent or remove or destroy any insect pests or plant diseases in the State. The board was also given power to appoint an Entomologist, who should be a skilled horticulturist, and Assistant Entomologist, if, in their judgment, it would be impossible for the Entomologist to discharge the duties hereby devolved upon him. Such an Entomologist was also given the powers of an inspector, with authority to visit in sections of the State where insects injurious to plants are believed to exist, and to determine whether such plants should or should not be destroyed.

Popular Science Bulletins

In addition to the Experiment Station bulletins setting forth the results of experiments and other investigations in the interest of agricultural industries, the College has inaugurated a series of bulletins on a variety of scientific subjects of interest to the people at large, and written, as far as practicable, in non-technical language. A number of these are now in preparation, including the subjects of road construction and maintenance, protection against lightning, etc. They will be mailed, like the Experiment Station bulletins, free of charge to those who apply for them.

Analyses, Information, Etc.

The various departments of the College and Experiment Station will furnish, free of charge, advice and information on any topic pertaining to general agriculture, horticulture, botany, entomology, veterinary science, dairying, stock breeding, etc.; also analyses of fertilizers, marls, waters and other substances, assays of ores, determination of rocks and minerals, tests of bricks, cements, building stones, illuminating oils, calibration of electrical instruments, etc.

All inquiries and requests should be addressed to the President, giving explicit account of conditions, difficulties, etc., as far as possible, and the matter will be referred promptly to the proper department for further correspondence.

Before sending samples of any kind for examination or analysis, it is best to write for instructions, and thus avoid trouble and delay.

Analyses for State Geologist

In addition to the work referred to above, analyses are made for the State Geologist of the various materials collected by him. These analyses are made as provided for in Paragraph 14, Section 1, Act of the General Assembly No. 605, approved February 22, 1902.

Farmers' Institutes

During the year farmers' institutes are held, under the management of the College, in many counties of the State. The President and professors of agriculture, chemistry, horticulture, dairying, veterinary science, botany, and other members of the Faculty, take part in these institutes. The effort is made to bring practical information to the

farmer, and to give him the results of scientific investigation in the interest of agriculture. The success thus far attained is most encouraging, and these institutions have become a permanent feature in the work of the College.

Farmers wishing an institute held in their county or community should write to the President

During the fall and winter months the College had the use of vestibule cars loaned it by the Southern Railway. These cars were transported free of cost to thirty-two different towns along the Southern and Atlantic Coast Line railways. A number of lecturers from the College, and experts in various lines from outside the State, accompanied the cars to give lectures on subjects relating to agriculture.

These cars were used as exhibit cars, illustrating the work done at Clemson by students in the various departments. They contained dairy apparatus, material to show best the methods of pruning grapes, fruit trees, methods of building, etc. Forty-five varieties of cowpeas, twenty varieties of corn, thirty varieties of wheat, samples of fertilizer constituents, geological specimens of valuable minerals found in the State, were also to be seen in these cars. The cars were also fitted with a magic lantern to give illustrated lectures on various subjects.

Thomas G. Clemson's Will

The following paragraphs are extracts from Mr. Clemson's will relating to the establishment of the College:

Whereas, I, Thomas G. Clemson, of the county and State aforesaid, did, on the 14th of August, 1883, execute my last will and testament, wherein I sought to provide for the establishment of a scientific institution upon the Fort Hill place, and therein provided what sciences should be taught in said institution; and, whereas, I am now satisfied that my intention and purpose therein may be misunderstood as intending that no other studies or sciences should be taught in said institution than those mentioned in said will, which was not my purpose or intention: Now, desiring to make my purpose plain, as well as to make some other changes in the disposition of my property than made in said will, I do now make, publish and declare this instrument as and for my last will and testament, hereby revoking all previous wills and codicils by me made, especially the will above referred to, dated August 14th, 1883. Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore, it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary

of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, to fix the course of studies, to make rules for the government of the same, and to change them, as in their judgment experience may prove necessary; but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agricultural and mechanical industries. I trust I do not exaggerate the importance of such an institution for developing the material resources of the State, by affording its youth the advantage of scientific culture, and that I do not overrate the intelligence of the Legislature of South Carolina, ever distinguished for liberality, in assuming that such appropriations will be made as will be necessary to supplement the fund resulting from the bequest herein made.

ITEM 1.—I therefore give and devise to my executor, hereinafter named, the aforesaid Fort Hill place, where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed (of which the Chief Justice of South Carolina shall be the judge), then my executor shall execute a deed of the said property to the said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation: *Provided, however,* That this acceptance by the State shall be signified, and a practical carrying out be commenced, within three years from the date of the probate of this my will. During this term of three years, or as much thereof as my elapse before the acceptance or refusal of this donation, my executor shall invest the net produce of the land and other property, such invested fund awaiting the action of the Legislature, and to form a part of the endowment of said institution, if accepted, or to form a part of the endowment of the college or school hereinafter provided for, should the donation not be accepted by the State.

ITEM 2.—The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit: R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker and J. E. Bradley; and the State, if it accepts the donation, shall never increase the Board of Trustees to a number greater than thirteen in all; nor shall the duties of said board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment

or election of the other six Trustees, if it accepts the donation. And I do hereby request the seven Trustees above named, or such of them as may be living, or may be willing to act, to meet as soon after my death as practicable, and organize and at once fill all vacancies that may have occurred, and exert themselves to effectuate my purposes as herein set forth. And I hereby instruct my executor to notify them of their appointment herein, as soon as practicable. The name of this institution is to be "The Clemson Agricultural College of South Carolina."

ITEM 3.—Should the three years expire without the State accepting the donation in manner hereinbefore provided, and if accepted, at the expiration of three years from my death no practicable beginning has been made to carry into effect the purposes of the donation, or if before the three years expire the Legislature shall refuse to accept said donation, then the donation to the State is hereby revoked, and my executor shall execute his trust by conveying the said Fort Hill place, and the accumulated fund arising therefrom, together with all other property, real or personal, hereinafter disposed of and intended to be given unto the said Agricultural College as an endowment, to the seven Trustees named above, or their successors, who shall erect upon the Fort Hill place such a school or college for the youth of South Carolina as in their judgment will be for their best interest: *Provided*, That said school or college be for the benefit of the agricultural and mechanical classes principally, and shall be free of cost to the pupils, so far as the means derived from the endowment hereinafter provided and the use of the land permit. The Trustees shall securely invest the fund hereinafter provided and given to said institution, and hold it as a perpetual endowment, and shall only use the interest derived therefrom and the income of the land to support and maintain said school or college, except that the accumulated fund derived from the land and the interest derived from the fund hereinafter given to said institution, from the time of my death and as much as five thousand dollars of the principal fund may be used if, in the judgment of the Trustees, it may be necessary, to erect suitable buildings for said college or school. The name of this institution shall be "The Clemson Scientific School or College."

ITEM 4.—It is my desire that the dwelling house on Fort Hill shall never be torn down or altered, but shall be kept in repair, with all the articles of furniture and vertu, which I hereinafter give for that purpose, and shall always be open for the inspection of visitors; but a part of the house may be used by such of the professors as the Trustees may direct.

ITEM 9.—I give and bequeath to my executor, to be held by him, subject to the trusts and conditions of Items 1, 2 and 3 of this my will, and for the purpose of adorning the Fort Hill residence as provided in Item 3 of this my will, all of my permanent furniture, relics and articles of vertu, pictures and paintings, including the large painting or picture of John C. Calhoun, now hanging in my sitting room, and not otherwise disposed of herein, and all my books.

ITEM 11.—All the residue and remainder of my property, of every kind and description whatsoever, after paying off the legacies above

provided for, together with the property which may revert to my estate, should it revert thereto, and the proceeds of all my real and personal property herein directed to be sold, and all accumulated funds derived from the Fort Hill place and interest on my investments, I give and bequeath to my executor, to be held by him subject to the trusts and conditions of Items 1, 2 and 3 of this my will.

Laws of Congress Relating to the College

AN ACT Donating Public Lands to the Several States and Territories Which May Provide Colleges for the Benefit of Agriculture and the Mechanic Arts.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That there be granted to the several States, for the purpose hereinafter mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: *Provided*, That no mineral lands shall be selected or purchased under the provisions of this Act.

SEC. 2. *And be it further enacted*, That the lands aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections not less than one-quarter of section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this Act, land script to the amount of acres for the deficiency of its distributive share; and script to be sold by said State, and the proceeds thereof applied to the uses and purposes prescribed in this Act, and for no other use or purpose whatever: *Provided*, That in no case shall any State to which land script may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land script upon any of the unappropriated lands of the United States subject to sale at private entry, at one dollar and twenty-five cents or less per acre: and: *Provided, further*, That not more than one million acres shall be located by such assignees in any one of the States; and: *Provided, further*, That no such location shall be made before one year from the passage of this Act.

SEC. 3. *And be it further enacted*, That all the expenses of management, superintendence and taxes, from date of selection of said lands previous to their sales, and all expenses incurred in the management and disbursement of the money which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said

lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

SEC. 4. *And be it further enacted*, That all moneys derived from the sale of the lands aforesaid by the State to which the lands are apportioned, and from the sale of land script hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or of some other safe stocks yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in fifth section of this Act), and the interest of which shall be inviolably appropriated by each State, which may take and claim the benefit of this Act to the endowment, support and maintenance of at least one College, where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, and in such manner as the Legislature of the States may prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. *And be it further enacted*, That the grant of land and land script hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts.

1. If any portion of the fund invested as provided by the foregoing section, or any portion of the interest thereon, shall, by any act or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall be regularly applied without diminution to the purposes mentioned in the fourth section of this Act, except that a sum not exceeding ten per centum upon the amount received by any State under the provision of this Act may be expended for the purchase of lands for sites of experiment farms whenever authorized by the respective Legislatures of said States.

2. No portion of said fund, nor interest thereon, shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

3. Any State which may take and claim the benefit of the provisions of this Act shall provide within five years at least not less than one college, as described in the fourth section of this Act, or the grant to said State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and the title to purchasers under the State shall be valid.

4. An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their costs and results, and such other matters, including State and industrial statistics, as may be supposed useful; one copy of which shall be transmitted by mail free by each to all the other colleges which may be endowed under the provisions of this Act, and also one copy to the Secretary of the Interior.

5. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they

shall be computed to the State at the maximum price, and the number of acres proportionately diminished.

6. No State, while in a condition of rebellion or insurrection against the government of the United States, shall be entitled to the benefit of this Act.

7. No State shall be entitled to the benefit of this Act unless it shall express the acceptance thereof by the Legislature within two years of the date of its approval by the President.

SEC. 6. *And be it further enacted*, That land script issued under the provisions of this Act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

SEC. 7. *And be it further enacted*, That the land officers shall receive the same fees for locating land script issued under the provisions of this Act as are now allowed for the location of military bounty land warrants under existing laws: *Provided*, That maximum compensation shall not be thereby increased.

SEC. 8. *And be it further enacted*, That the Governors of the several States to which script land shall be issued under this Act shall be required to report annually to Congress all sales made of such script until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds

Approved July 2, 1862.

AN ACT to Establish Agricultural Experiment Stations in Connection With the Colleges Established in the Several States Under the Provisions of an Act Approved July 2, 1862, and of the Acts Supplementary Thereto.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of college or colleges, or agricultural department of colleges in each State or Territory established, or which may hereafter be established, in accordance with the provisions of an Act approved July 2, 1862, entitled "An Act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and mechanic arts," or any of the supplements to said Act, a department known and designated as an "Agricultural Experiment Station:" *Provided*, That any State or Territory in which two such colleges have been or may be so established, the appropriation hereinafter made to such State or Territory shall be equally divided between such colleges, unless the Legislature of such State or Territory shall otherwise direct.

SEC. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a

varying series of crops; the capacity of new plants or trees for acclimation; the analyses of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying condition and needs of the respective States and Territories.

SEC. 3. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate, from time to time, such lines of inquiry as to him shall seem most important; and, in general, to furnish such advice and assistance as will promote the purposes of this Act. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

SEC. 4. That bulletin or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the States or Territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the Postmaster-General may from time to time prescribe.

SEC. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments and printing and distributing the results as hereinbefore prescribed, the sum of \$15,000 per annum is hereby appropriated to each State, to be especially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of Section eight of this Act, out of any money in the treasury proceeding from the sales of public lands, to be paid in equal quarterly payments, on the first day of January, April, July and October in each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, 1887: *Provided, however,* That out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement, or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five per centum of such annual appropriation may be so expended.

SEC. 6. That whenever it shall appear to the Secretary of the Treasury from the annual statement of receipts and expenditures of any of said stations that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the succeeding annual appropriation to each station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this Act shall be construed to impair or modify the legal relation existing between any of the said colleges and the government of the States or Territories in which they are respectively located.

SEC. 8. That in States having colleges entitled under this section to the benefits of this Act and having also agricultural experiment stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiments at stations so established by such States; and in case any State shall have established under the provisions of said Act of July 2d aforesaid, an agricultural department or experiment station, in connection with any university, college or institution not distinctively an agricultural college, or school, and such States shall have established or shall hereafter establish a separate agricultural college or school, which shall have connected therewith an experimental farm or station, the Legislature of such State may apply, in whole or in part, the appropriation made by this Act, to separate agricultural college or school, and no Legislature shall, by contract expressed or implied, disable itself from so doing.

SEC. 9. That the grants of money authorized by this Act are made subject to the legislative assent of the several States and Territories to the purposes of said grants: *Provided*, That payment of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified to by the Secretary of the Treasury.

SEC. 10. Nothing in this Act shall be held or construed as binding the United States to continue any payments from the Treasury to any or all the States or institutions mentioned in this Act, but Congress may at any time amend, suspend or repeal any or all the provisions of this Act.

Approved March 2, 1887.

AN ACT to Provide for an Increased Annual Appropriation for Agricultural Experiment Stations and Regulate the Expenditure Thereof.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled. That there shall be, and hereby is, annually appropriated, out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of agricultural experiment stations now established,

or which may be hereafter established, in accordance with the Act of Congress, approved March second, eighteen hundred and eighty-seven, the sum of five thousand dollars for the year ending June thirtieth, nineteen hundred and six, and an annual increase of the amount of such appropriation thereafter for five years by an additional sum of two thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be fifteen thousand dollars, to be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective States or Territories.

SEC. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of agricultural experiment stations shall be annually paid, in equal quarterly payments, on the first day of January, April, July and October of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of Agriculture, out of the Treasury of the United States, to the treasurer or other officer duly appointed by the governing boards of said experiment stations to receive the same, and such officers shall be required to report to the Secretary of Agriculture, on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement, on schedules prescribed by the Secretary of Agriculture. The grants of money authorized by this Act are made subject to legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified by the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of any State or Territory for the further and more complete endowment, support and maintenance of agricultural experiment stations as provided in this Act shall by any action or contingency be diminished or lost, or be misapplied, it shall be replaced by said State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys, exceeding five per centum of each annual appropriation, shall be applied directly or indirectly under any pretense whatever to the purchase, erection, preservation or repair of any building or buildings, or to the purchase or rental of land. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located, a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the Secretary of Agriculture and to the Secretary of the Treasury of the United States.

SEC. 4. That on or before the first day of July in each year after the passage of this Act the Secretary of Agriculture shall ascertain

and certify to the Secretary of the Treasury as to each State and Territory, whether it is complying with the provisions of this Act and is entitled to receive its share of the annual appropriation for agricultural experiment stations under this Act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of Agriculture shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of Agriculture. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury; and the Secretary of Agriculture is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of Agriculture shall make an annual report to Congress on the receipts and expenditures and work of the agricultural experiment stations in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. That Congress may at any time amend, suspend or repeal any or all of the provisions of this Act.

Approved March 16, 1906.

AN ACT to Supply a Portion of the Public Lands to the More Complete Endowment and Support of Colleges for the Benefit of Agriculture and the Mechanic Arts, Established Under the Provisions of an Act of Congress, Approved July Second, Eighteen Hundred and Sixty-Two.

*Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That there shall be, and hereby is, annually appropriated out of any money in the Treasury not otherwise appropriated, arising from the sales of public lands, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an Act of Congress, approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of one thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction: *Provided*, That no money shall be paid out under this Act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in admission of students, but the establishment and maintenance of such colleges separately for white and colored stu-*

dents shall be held to be a compliance with the provisions of this Act if the funds received in such State or Territory be equitably divided as hereinafter set forth: *Provided*, That in any State in which there has been one college established in pursuance of the Act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the Act to which this Act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the funds to be received under this Act between one college for white students and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this Act and subject to its provisions, as much as it would have been if it had been included under the Act of eighteen hundred and sixty-two, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provisions in reference to separate colleges for white and colored students.

SEC. 2. That the sum hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury upon the warrant of the Secretary of the Interior, out of the Treasury of the United States, to the State or Territorial Treasurer or to such officer as shall be designated by the laws of such State or Territory to receive same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this Act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support and maintenance of colleges, or of institutions for colored students, as provided in this Act, shall, by any action or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the

purchase, erection, preservation or repair of any building or buildings. An annual report by the president of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experimental stations attached to said colleges, with their costs and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail to all other colleges further endowed under this Act.

SEC. 4. That on or before the first day of July in each year, after the passage of this Act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory, whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this Act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid it shall be covered into the Treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. Congress may at any time amend, suspend or repeal any or all of the provisions of this Act.

Approved August 30, 1890.

Agricultural Appropriation Act, Passed Senate February 21, 1907; Passed House March 2, 1907. Approved by the President March 4, 1907.

That there shall be, and hereby is, annually appropriated out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of agricultural colleges now established, or which may hereafter be established, in accordance with the Act of Congress, approved July 2, 1862, and the Act of Congress, approved August 30, 1890, the sum of \$5,000, in addition to the sums named in said Act, for the fiscal year ending June 30, 1908, and an annual increase of the amount of such appropriation thereafter for four years by an additional sum of \$5,000 over the preceding year, and the annual sum to be paid thereafter to each State and Territory shall be \$50,000, to be applied only for the purpose of the agricultural

colleges as defined and limited in the Act of Congress, approved July 2, 1862, and the Act of Congress approved August 30, 1890.

That the sum hereby appropriated to the States and Territories for the further endowment and support of the colleges shall be paid by, to, and in the manner prescribed by the Act of Congress, approved August 30, 1890, entitled, "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of the Act of Congress, approved July 2, 1862," and the expenditure of the said money shall be governed in all respects by the provisions of the said Act of Congress, approved July 2, 1862, and the said Act of Congress, approved August 30, 1890: *Provided*, That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts.

State Laws Relating to the College

In November, 1889, the General Assembly passed the following law, authorizing the establishment of the Clemson Agricultural College of South Carolina:

SECTION 1300. The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament, which was duly admitted to probate on the twentieth day of April, 1888, in the office of the Judge of Probate of the County of Oconee, in the State of South Carolina, wherein he devised and bequeathed to his executor, Richard W. Simpson, of Pendleton, South Carolina, a tract of land situated on Seneca River, in Oconee County, in said State, containing eight hundred and fourteen acres, more or less, known as the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson, subject to the terms and conditions set forth in his last will and testament, and the Treasurer of the State is hereby authorized and empowered to receive and securely hold the said property, both real and personal, and to execute all necessary papers and receipts therefor as soon as the said executor shall convey and transfer the said devise and bequest to the State.

SEC. 1301. The deed and transfer of said property to the State having been duly executed and made by the said executor, in accordance with the provisions of said will, an Agricultural and Mechanical College in connection with the aforesaid devise and bequest, to be styled "The Clemson Agricultural College of South Carolina," and situated at Fort Hill, in Oconee County, on the plantation so devised; in which College shall be taught all branches of study pertaining to practical and scientific agricultural and other industries connected

therewith, and such other studies as are not inconsistent with the terms of the said will.

SEC. 1302. The said College shall be under the management and control of a board of thirteen Trustees, composed of the seven members nominated by said will, and their successors, and six members to be elected by the Legislature, in Joint Assembly.

SEC. 1308. One-half of the Land Scrip Fund heretofore vested by Section 1045 of the General Statutes (1882) in the Board of Trustees of the University of South Carolina is hereby vested in the six members of the Board of Trustees of the Clemson Agricultural College elected by the General Assembly; and the State Treasurer is authorized and required to issue a certificate of State stock in the sum of ninety-five thousand nine hundred dollars, bearing interest at the rate of six per centum per annum, payable semi-annually, to the said six members of the said Board of Trustees, to be held as a perpetual fund, the capital of which shall forever remain undiminished, the income of said fund to be used by said Board of Trustees for the building and maintenance of the said Clemson Agricultural College, in accordance with the purposes for which the said land scrip was donated by the Act of Congress in relation thereto.

SEC. 1309. The annual grant of fifteen thousand dollars, commonly known as the Hatch Bill Fund, made to the State of South Carolina by the Congress, entitled "An Act to establish agricultural experiment stations in connection with the colleges established in the several States under the provisions of an Act approved July second, eighteen hundred and sixty-two, and of the Act supplementary thereto," approved March 2d, 1887, shall be, and hereby is, withdrawn from the control of the Board of Trustees of the University of South Carolina, in whom it was vested by an Act entitled "An Act to amend Chapter XX of the General Statutes, entitled 'Of the University of South Carolina,'" approved December 22, 1887; and the said grant of fifteen thousand dollars is hereby vested in the six members of the Board of Trustees of the Clemson Agricultural College of South Carolina chosen by the General Assembly; and an agricultural experiment station shall be established in connection with the said Clemson Agricultural College, and under the direction of the Board of Trustees thereof, to be supported by said grant according to the provisions of the Act of Congress hereinbefore mentioned.

SEC. 1310. The Department of Agriculture of this State, as heretofore constituted and provided for by law, is abolished, and also the office of Commissioner of Agriculture for this State.

SEC. 1311. All the powers, duties, rights and privileges heretofore vested in and exercised by the Commissioner of Agriculture and the Department of Agriculture of this State are hereby vested in and devolved upon the Board of Trustees of the Clemson Agricultural College of South Carolina, except that said board shall not have any rights, powers or privileges in reference to or in connection with the management and control of the rights and interests of the State in the phosphate rock or phosphate deposits in the navigable streams and marshes thereof.

SEC. 1319. All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer of the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South Carolina; and so much of the money so received as shall be necessary to defray the expenses of the board in performing the duties now by this chapter devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance.

SEC. 1320. A municipal corporation is hereby created, known as Clemson College, the limits of which shall consist of all the lands belonging to the said College and cover all the territory included in a circle formed with the College building as a center, with a radius of five miles, thus making the diameter of the circle ten miles, within which shall be of the value of one hundred dollars per annum, and which boundaries the jurisdiction of the corporation shall extend. No dispensary shall ever be located at Calhoun.

The General Assembly also passed the following law in reference to the appropriation made by Congress under the provisions of the Act approved August 30, 1890:

SEC. 1299. All sums which shall be received by the State from the United States Government, under the provisions of the Act of Congress, approved August 30th, 1890, entitled "An Act to apply a portion of the public lands to the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts established under the provisions of an Act of Congress approved July 2d, 1862," shall be equally divided between the Colored Normal and Industrial College and Clemson Agricultural College to the purposes specified in said Act.

Law Relating to the State Geologist

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina,* That a section be added to Article VI, under title "The State Geologist," Civil Code of South Carolina, Volume I, after Section 740, to be known as Section 740a. That the State Geologist furnish to Clemson Agricultural and Mechanical College as many duplicate specimens of minerals collected by him as may be practicable: *Provided,* Said College shall pay transportation charges.

Approved the second day of March, A. D. 1903.

Scholarship Law

AN ACT to Provide for Beneficial Scholarships in the Clemson Agricultural College of South Carolina.

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina,* That there are hereby established and created one hundred and twenty-four (124) beneficiary scholarships in the Clemson Agricultural College of South Carolina, and each of said scholarships shall be of the value of one hundred dollars per annum, and shall be apportioned and distributed among the several counties of the State in the same manner as the Members of the House of Rep-

representatives are apportioned, so that each county shall have as many scholarships as such county is entitled to Members in the House of Representatives.

SEC. 2. That said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said College for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural course.

SEC. 3. The questions for such examinations shall be prepared by the President or some member or members of the Faculty of the said Clemson Agricultural College, under the direction of the President, and shall be forwarded to the respective County Boards of Education on or before the 15th day of July in each year, together with a statement showing the number of vacant scholarships to which each county is entitled; and the said County Boards of Education shall hold the said examinations and thereafter read and grade the examination papers of all applicants and forward the same to the State Board of Education with their recommendations as to the award of the scholarships.

SEC. 4. That before applying for the said scholarships, applicants shall make proof under oath to their respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said board permission to stand such examination.

SEC. 5. That scholarships shall be paid from the regular income of said Clemson Agricultural College as now provided by law, and shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and the said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses.

SEC. 6. That this Act shall go into effect from and after the first day of July, A. D. 1904.

Approved the 25th day of February, A. D. 1904.

AN ACT to Amend an Act Entitled "An Act to Provide for Beneficiary Scholarships in the Clemson Agricultural College of South Carolina."

SECTION 1. That there are hereby established and created one hundred and sixty-five (165) beneficiary scholarships in the Clemson Agricultural College of South Carolina; and each of said scholarships shall be of the value of one hundred dollars per annum, and shall be apportioned and distributed among the several counties of the State in the same manner as the Members of the Senate and House of Representatives are apportioned, so that each county shall have as many scholarships as such county is entitled to Members in the Senate and House of Representatives.

SEC. 2. That said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Board of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said College for other students who shall have passed an approved examination upon the common school branches and made at least sixty per cent. upon such examinations; and preference shall be given to those young men who desire to take the agricultural course and the textile course: *Provided*, That not more than one scholarship from each county shall be open to the textile course.

SEC. 3. The examinations for the award of these scholarships shall be conducted in the following manner: The questions for such examinations shall be prepared by the President or some member or members of the Faculty of the said Clemson Agricultural College, under the direction of the President, and shall be forwarded to the respective County Boards of Education on or before the 15th day of July in each year, together with a statement showing the number of vacant scholarships to which each county is entitled. The said County Boards of Education shall hold the said examinations by numbers, *i. e.*, by requiring each applicant to draw a number from a miscellaneous collection of numbers furnished by said County Boards. Each applicant shall then seal his name in an envelope, which shall be kept sealed by said County Boards of Education. The applicants shall then put their numbers and not their names on their papers. The papers shall be forwarded to the President of Clemson College, and the members of the Faculty of that institution who may be designated by the President thereof shall examine the papers and return the marks of the applicants to the County Boards of Education by the numbers as furnished to said Faculty. The County Boards of Education shall then open the envelopes containing the names and make recommendations as to the award of the scholarships to the State Board of Education.

SEC. 4. That before applying for the said scholarships applicants shall make proof, under oath, to their respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said board permission to stand such examination.

SEC. 5. That the said scholarships shall be paid from the regular income of said Clemson Agricultural College, as now provided by law, and shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and the said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries and applied towards the payment of his board and other necessary school expenses.

SEC. 6. That this Act shall go into effect from and after its passage.

SEC. 7. This Act shall take effect upon its approval by the Governor.

Christmas Holidays

AN ACT to Set Apart and Establish Christmas Holidays for the State Institutions of Higher Learning in the State of South Carolina.

SECTION 1. *Be it enacted by the General Assembly of the State of South Carolina.* That all the State colleges shall suspend exercises for a period of not exceeding ten days, including the time required for going from and returning to said colleges, said period to include Christmas day and New Year's day.

Approved the 17th day of February, A. D. 1906.

ALUMNI ORGANIZATIONS

Clemson College Alumni Association

D. H. HENRY, '98, President.

S. E. LYLES, '00, First Vice-President.

J. C. WYLIE, '02, Second Vice-President.

T. E. STOKES, '06, Third Vice-President.

A. B. BRYAN, '98, Secretary.

W. W. KLUGH, '96, Treasurer.

E. B. BOYKIN, '02, Alumni Orator of 1907; H. C. TILLMAN, '03, Alternate.

The Clemson Club of New York City

R. G. FORSYTHE, '01, President.

D. A. J. SULLIVAN, '02, Vice-President.

J. B. MOSELEY, Secretary and Treasurer.

Pittsburg Chapter of the Clemson Alumni Association

A. E. HOLMAN, '04, President.

V. C. PLATT, '04, Vice-President.

R. P. EVANS, '05, Secretary and Treasurer.

Washington Chapter of the Clemson Alumni

M. E. ZEIGLER, '02, President.

J. E. HARRALL, '05, Vice-President.

G. F. KLUGH, '01, Secretary.

L. E. BOYKIN, '05, Treasurer.

Honorary Members—SENATOR B. R. TILLMAN, HON. A. F. LEVER.

Schenectady Chapter of the Clemson Alumni Association

P. G. LANGLEY, '96, President.

T. S. Gandy, '03, Vice-President.

V. BAKER, '04, Secretary-Treasurer.

Greenville Chapter Clemson Alumni Association

L. O. MAULDIN, '00, President.

L. P. SLATTERY, '05, Secretary and Treasurer.

GRADUATES 1896—1907

Below are given the occupations and addresses of the alumni, so far as ascertainable at the College, although in several instances as indicated these are not positively known. This preliminary and imperfect list is published here, however, in the hope that it may serve as an aid in the preparation of a complete record of all alumni from the time of graduation, which it is the purpose of the College to compile and publish from time to time in pamphlet form. Graduates, former students, and friends of the institution are requested to co-operate in making this record as nearly complete as possible and in the effort to keep it constantly up to date. The graduates themselves are specially urged to send notice promptly of all changes of occupation or addresses, promotions, honors, etc.

Information for this record should be addressed to Prof. A. G. Shanklin, Clemson College, S. C.

[Note.—Courses pursued are indicated by initials in parentheses: A, Agricultural; C, Civil engineering; M, Mechanical-electrical; T, Textile. The numbers accompanying these show years of graduation.]

ADAMS, D. G. (C '06), Asst. Engineer Virginia Passenger & Power Co., Richmond, Va.

ADAMS, P. H. (M '06), Draftsman, General Electric Co., Schenectady, N. Y.

ADAMS, W. G. (C '00), Erecting Engineer, Roanoke Bridge Co., Roanoke, Va.

ALFORD, N. H. (T '03), Asst. Supt. Merrimac Mfg. Co., Huntsville, Ala.

ALFORD, E. P. (C '06), Draftsman, Fort Pitt Bridge Co., Cannonsburg, Pa.

- ALL, J. E. (A '00), Bookkeeper, 421 Abercorn Street, Savannah, Ga.
- ALL, P. H. (M '01), Bookkeeper, 224 Barnard Street, Savannah, Ga.
- ANDERSON, J. W. (T '01), Richburg, S. C., R. F. D. No. 1.
- AULD, F. (M. '06), Engineering Apprentice, Westinghouse Elec. & Mfg. Co., Wilkinsburg Station, Pittsburgh, Pa.
- AULL, B. M. (M '96), Supt. Pendleton Mfg. Co., Pendleton, S. C.
- AULL, W. B. (A '07), Post-graduate Student, Clemson College, S. C.
- AYER, L. W. (A '00), Tobacco Investigation Expert, Bureau of Soils, U. S. Dept. of Agriculture, Marion, Ala.
- BAILEY, J. B. (M '07), Stanley Electric Co., Pittsfield, Mass.
- BAKER, V. (M '04), General Electric Co., Schenectady, N. Y.
- BALLINGER, C. P. (C '05), Railroad Contractor, Richland, S. C.
- BAMBERG, G. E. (M '02), Jeweler, Bamberg, S. C.
- BANKS, M. H. (M '07), Supt. City Light and Water-Works, St. Matthews, S. C.
- BARKSDALE, G. R. (M '06), Stanley Elec. Co., Pittsfield, Mass.
- BARKSDALE, J. H. (M '07), Stanley Elec. Co., Pittsfield, Mass.
- BARNWELL, W. H. (M '03), Inspector Southeastern Tariff Association, Birmingham, Ala.

- BARRE, B. H. (M '02), Manager Barre Lumber Co., Lexington, S. C.
- BARRE, H. W. (A '05), Associate Professor of Botany, Clemson College, S. C.
- BARRETT, A. R. (T '02), Mail Service, Rock Hill, S. C.
- BARTON, T. F. (M '06), Testing Dept. General Electric Co., Schenectady, N. Y.
- BASKIN, W. S. (M '06), Testing Dept. General Electric Co., Schenectady, N. Y.
- BEATY, J. T. (C '03), Draftsman, Liddell Mfg. Co., Charlotte, N. C.
- BEATY, W. S. (T '05), Orr Cotton Mills, Anderson, S. C.
- BECKETT, W. (M '06), Draftsman, General Electric Co., Schenectady, N. Y.
- BISSELL, O. H. (C '07), 167 Rutledge Ave., Charleston, S. C.
- BISSELL, T. L. (M '07), Westinghouse Elec. Co., 127 Whitney Ave., Wilkesburg, Pa.
- BLACK, W. E. G. (M '03), Consulting Engineer, City Works, Spartanburg, S. C.
- BLAINE, J. M. (A '96), Chemist, Swift & Co., Montgomery, Ala.
- BLEASE, J. W. (M '01), Electrician, in charge of Greenville Office, Piedmont Electric & Construction Co., Anderson, S. C.
- BOESCH, J. C. (M '06), Engineering Apprentice Westinghouse Elect. & Mfg. Co., Wilkesburg Station, Pittsburgh, Pa.
- BOGGS, L. (M '07), General Electric Co., Schenectady, N. Y.
- BOINEAU, C. E. (T '03), Traveling, Columbia, S. C.
- BOND, S. I. (A '07), Pacific Mines, Beaufort, S. C.

- BOULWARE, G. P. (A '96), Farming, Newberry, S. C.
- BOWEN, J. T. (M '96), Draftsman, Newport News Shipping Co., Newport News, Va.
- BOYKIN, E. B. (A '02), Special Agent, B. P. I., U. S. Dept. of Agriculture, Washington, D. C.
- BOYKIN, L. E. (A '05), Attorney-at-Law, Orangeburg, S. C.
- BRADFORD, J. L. (C '03), Civil Engineer, American Bridge Co., New York, N. Y.
- BRADLEY, J. T. (M '96), Clerking, Abbeville, S. C.
- BREAZEALE, J. F. (A '96), Chemist, Bureau of Soils, U. S. Dept. of Agriculture, Washington, D. C.
- BRISTOW, T. N. (M '07), Westinghouse Co., 127 Whitney Ave., Wilkesburg, Pa.
- BRITT, A. K. (C '07), Civil Engineer, McCormick, S. C.
- BROCKMAN, E., JR. (A '02), Clerk St. John's Hotel, Charleston, S. C.
- BRODIE, J. (T '05), Textile Chemist, in charge dye plant, Huntsville, Ala.
- BROWN, E. F. (M '04), Southern Bell Tel. Co., Charleston, W. Va.
- BROWN, J. H. (T '02), Merchant, Mountain Rest, S. C.
- BROWN, J. J. (A '07), Cowpens, S. C.
- BROWNE, D. O. (A '98), Asst. Cashier People's Bank, Anderson, S. C.
- BRUNSON, A. L., JR. (C '06), Civil Engineer, Southern Power Co., Charlotte, N. C.
- BRYAN, A. B. (A '98), Asst. Professor of English, Clemson College, S. C.
- BRYAN, S. G. (A '04), Supt. Alderman Stock Farm, Alcolou, S. C.

- BRYANT, F. L. (M '96), Consulting Engineer, Spartanburg, S. C.
- BULL, I. W. (C '06), at present in charge of mother's farming business, Vance, S. C.
- BURGESS, J. M. (A '02), Asst. in Dairying and Animal Husbandry, Clemson College, S. C.
- BURGESS, W. A. (C '01), Erecting Engineer, Coal River Ry. Co., St. Albans, W. Va.
- BUTLER, A. A. (A '01), Real Estate, Greenville, S. C.
- BYARS, A. F. (A '06), Cotton Buyer, Marion, S. C.
- CAIN, W. O. (T '03), Textile Chemist, Overseer in Dyeing Plant, Richmond, Va.
- CALDWELL, J. C. L. (M '05.), Southern Express Co., Columbia, S. C.
- CALHOUN, J. S., JR. (C '99), Supt. of Construction for Moise DeLeon, Contractor, Atlanta, Ga.
- CALHOUN, P. M. (M '96), Auditor, Accounting Dept. Swift & Co., Chicago, Ill.
- CAMPBELL, A. L. (C '07), Ridgeland, S. C.
- CAMPBELL, E. G. (M '02), Electrician, General Electric Co., Panama.
- CANNON, H. L. (T '01), Hartsville Cotton Mill, Hartsville, S. C.
- CANNON, R. S. (M '00), Electrical Engineer, Catawba Power Co., Rock Hill, S. C.
- CANTY, H. T. (C '02), Resident Engineer, R. & C. B. Railway Co., Richmond, Va.
- CARPENTER, W. H. (M '96), Second Lieut. U. S. Army, Instructor in Mathematics, West Point, N. Y.
- CARR, A. B. (M '02), Manager Buckeye Cotton Oil Co., Jackson, Miss.

CARTER, B. D. (A '07), Stock Inspector, B. A. I., Dept. of Agr., Belton, S. C.

*CAUGHMAN, J. E. (M '00).

CHAPMAN, W. E. (T '02), Teaching and Farming, Denver, S. C.

CHEATHAM, J. E. (A '01), Conductor, Southern Railway, Greenville, S. C.

CHERRY, D. F. (C '06), Asst. Engineer, Panama Canal Service, Panama.

CHISOLM, W. B. (M '03), Supt. Fort Meade Mines, V.-C. Chemical Co., Fort Meade, Fla.

CHREITZBERG, A. M. (M '96), Southern Railway Co., Washington, D. C.

CHREITZBERG, C. K. (M '99), Resident Engineer, Roanoke Bridge Co., Rock Hill, S. C.

CLARK, J. C. (A '07), Touring the World, address unknown.

CLEVELAND, A. F. (A '06), Manager Dairy Farm, Spartanburg, S. C.

CLINKSCALES, G. B. (M '02), Student, Johns Hopkins, Baltimore, Md.

CLINKSCALES, L. D. (T '01), Traveling, Heinz Pickle Co., Spartanburg, S. C.

COLE, W. F. (T '02), Medical Student, Johns Hopkins University, Baltimore, Md.

COLEMAN, W. W. (M '02), Civil Engineer, U. S. Government Service, Philippine Islands.

CONNOR, F. A. (M '07) Westinghouse Co., 127 Whitney Ave., Wilkinsburg, Pa.

CONNOR, J. R. (A '04), Farming, Eutawville, S. C.

*Died February 24, 1907.

- COPE, F. E. (T '05), Supt. Leota Cotton Mill, Graham, N. C.
- COTHRAN, P. C. (C '04), Asst. Engineer, S. & W. Ry., Raleigh, N. C.
- COTHRAN, T. W. (M '96), Civil Engineer, at present with Norfolk & Southern Ry., Raleigh, N. C. Permanent address, Greenwood, S. C.
- COTHRAN, W. B. (T '02), Asst. Engineer, U. S. Revenue Cutter Service.
- CRAWFORD, E. A. (A '07), Farming, McConnellsville, S. C.
- CRAWFORD, FRANK (M '02), Inspector, U. S. Navy Yard, Charleston, S. C.
- CROMER, B. C. (T '02), Teaching, Anderson, S. C., Graded Schools.
- CROUCH, H. W., JR. (C '05), Asst. Engineer, S. A. L. Ry., Waldo, Fla.
- CRUM, H. C. (A '07), Farming, Denmark, S. C.
- CULLUM, J. C. (T '03), U. S. Revenue Cutter Service, Asst. Engineer U. S. S. "Onondaga." Address, Treasury Dept., Washington, D. C.
- CUMMINGS, J. P. (T '03), Draftsman, S. A. L. Ry., Portsmouth, Va.
- CUNNINGHAM, F. H. (T '03), Civil Engineer, with DeCamp & Cunningham, Anderson, S. C.
- CUNNINGHAM, J. G. (T '03), with DeCamp & Cunningham, Anderson, S. C.
- CURTIS, G. D. (C '07), Student, Cornell University, Ithica, N. Y.
- DALTON, R. E. (C '07), Civil Engineer, Pelzer, S. C.
- DARLINGTON, W. R., JR. (T '01), Traveling, Savannah, Ga.

- DERRICK, O. L. (T '06), Dyer, Victoria Cotton Mills, Rock Hill, S. C.
- DESAUSSURE, F. G. (M '03), Engineer, with Erie Engine Works, Meadville, Pa.
- DIBBLE, E. B. (M '05), Engineering Apprentice, Westinghouse Elect. & Mfg. Co., Wilkinsburg Station, Pittsburg, Tenn.
- DICKSON, L. C. (T '06), with W. E. Dickson, Yarn Broker, Charlotte, N. C.
- DODD, H. B. (C '00), Asst. Engineer, American Bridge Co., Charleston, S. C.
- DONALDSON, J. R. (T '00), Union Cotton Mills, Lafayette, Ga.
- DOUTHIT, C. (M '02), State Manager, Buckeye Co., Atlanta, Ga.
- DOWLING, D. (M '96), District Agt. Toledo Scales Co., and Gen. Agt. Hammond Typewriter Co., Columbia, S. C.
- DUCKWORTH, J. C. (T '01), Mgr. Williamston Oil Mill, Williamston, S. C.
- DURANT, C. E. (C '07), Cottageville, S. C.
- DWIGHT, F. M. (M '07), Personal Asst. to Prof. W. M. Riggs, Clemson College, S. C.
- EARLE, D. E. (T '03), Asst. Professor Carding and Spinning, Clemson College, S. C.
- EARLE, E. P. (M '96), Owner and Supt. Seneca Iron Works, Seneca, S. C.
- EARLE, J. C. (M '02), Bookkeeper, Anderson, S. C.
- EASON, T. D. (A '07), Asst. Professor of Botany, A. & M. College of N. C., Raleigh, N. C.
- EASTERLING, R. A. (M '07), Stanley Elect. Co., Woodlawn Inn, Pittsfield, Mass.

- ELDER, M. L. (M '99), Designer in Transformer Dept.,
Gen. Elect. Co., Schenectady, N. Y.
- ELIAS, P. L. (M '04), with Schoenberg & Co., Electrical
Contractors, New York City.
- ELLIOTT, T. K. (M '05), New York Telephone Co., 199
DeKalb Ave., Brooklyn.
- ELLIS, E. D. (M '03), Supt. City Power & Light Plant,
Plant City, Fla.
- ELLISON, A. G. (A '06), Southern Cotton Oil Co., Gas-
tonia, N. C.
- ELLISON, T. R. (M '06), Engineering Apprentice, West-
inghouse Elect. & Mfg. Co., Wilkinsburg, Pa., 127
Whitney Ave.
- EPPS, H. G. (C '00), Farming, Midland City, Ala.
- EPPS, S. W. (A '03), Farming, Kingstree, S. C.
- ERVIN, A. L. (C '07), Florence, S. C.
- EVANS, R. P., JR. (M '05), Engineering Division, West-
inghouse Elect. & Mfg. Co., Wilkinsburg, Pa., 127
Whitney Ave.
- FAIR, W. N. (T '01), Fertilizer Inspector, Edgefield, S. C.
- FARIS, S. J. (M '04), Catawba Power Co., Rock Hill, S. C.
- FELDER, S. I. (M '04), New York Telephone Co., 199
DeKalb Ave., Brooklyn.
- FINGER, E. R. (C '03), Civil Engineer, Fort Pitt Bridge
Works, Cannonsburg, Pa.
- FLETCHER, B. A. (C '00), Merchant, Gibson, N. C.
- FOLK, J. F. (A '96), Cashier Holly Hill Bank, Holly Hill,
S. C.
- FOLK, G. H. (M '07), General Elect. Co., 142 Nott Ter-
race, Schenectady, N. Y.
- FORD, S. T. (T '04), Eureka Mills, Chester, S. C.

- FORSYTHE, R. G. (M '01), Draftsman, U. S. Navy Yard, Brooklyn, 199 DeKalb Ave.
- FOX, L. W. (T '03), Overseer Spinning Dept., Shetucket Mfg. Co., Norwich, Conn.
- FREEMAN, B. (A '03), Asst. in Chemistry, Clemson College, S. C.
- FURMAN, C. M., JR. (A '96), Constructing Engineer, with Lockwood & Green Co., Pee Dee, N. C.
- FURTICK, F. M. (M '07), Erie Shops, Meadville, Pa.
- GANDY, A. A. (T '05), Darlington Cotton Mill, Darlington, S. C.
- GANDY, T. S. (M '03), General Electric Co., Schenectady, N. Y.
- GARDNER, B. H. (M '03), Supt. Motor Dept., Dayton Lighting Co., Dayton, O.
- *GARRIS, J. S. (A '98).
- GARRISON, W. D. (A '03), Foreman Experiment Station Farm, Summerville, S. C.
- GELZER, JOHN (M '04), Correspondence Division, Westinghouse Elect. & Mfg. Co., Birmingham, Ala.
- GELZER, J. A. (M '06), Wagner Electric Mfg. Co., St. Louis, Mo.
- GENTRY, C. W. (A '98), Physician, Greenville, S. C.
- GEORGE, W. D. (M '00), Electrician, Arkwright Cotton Mills, Laurens, S. C.
- GETTYS, J. E. (T '02), Overseer Weaving Dept., Victoria Mills, Rock Hill, S. C.
- GIGNILLIAT, C. N. (M '02), Dealer in Cotton, Fertilizers, etc., Seneca, S. C.
- GILES, H. E. (M '07), Westinghouse Elect. Co., 127 Whitney Ave., Wilkinsburg, Pa.

*Died November 26, 1903.

GLENN, J. P. (T '03), Dentist.

GLENN, T. K. (M '01), General Electric Co., Schenectady, N. Y.

GOGGANS, J. C. (M '05), Instructor in Engineering, Newberry College, Newberry, S. C.

GOODING, P. H. (A '96), Merchant and Farmer, Crockettville, S. C.

GOODING, R. F. (M '05), Engineering Apprentice, Westinghouse Elect. & Mfg. Co., Wilkinsburg Station, Pittsburg, Pa.

GOODWIN, T. L. (C '06), Special Engineer, S. & W. Ry., Forest City, N. C.

GRACE, M. A. (M '04), Southern Power Co., Charlotte, N. C.

GRAINGER, C. A. (T '06), Overseer, Fairfield Cotton Mills, Winnsboro, S. C.

GRAY, H. K. (A '00), City Postoffice, Greenville, S. C.

GRAY, J. J., JR. (C '00), Mgr. Farmers' Oil Mill, Brunson, S. C.

GREEN, H. (M '03), New York Telephone Co., 199 DeKalb Ave., Brooklyn, N. Y.

GUNBY, F. M. (M '02), with Dean & Mean, Engineers, Boston, Mass.

HAGOOD, C. B. (T '03), Mgr. Pickens Cotton Mill, Pickens, S. C.

HALL, V. B. (M '04), with Ford, Bacon & Davis, Engineers, New York City, 223 W. Twenty-third St.

HALLUM, R. T. (A '98), County Supt. of Education, Pickens, S. C.

HAMILTON, R. G. (A '96), Physician, Converse, S. C.

HAMLIN, F. T. (T '04), Engineer, Panama.

- HANVEY, G. A., JR. (A '98), Veterinarian, U. S. Army,
Fort Riley, Kan.
- HANVEY, J. T. (M '98), Electrical Engineer, U. S. Navy
Yard, Portsmouth, Va.
- HARDIN, G. H. (A '02), Chemist, New York Sugar Trade
Lab., 80 South St., New York.
- HARPER, S. P. (M '06), Draftsman, General Elect. Co.,
Schenectady, N. Y.
- HARRELL, J. E. (M '03), Asst. Supt. of Lines and Cables,
United Railways Co., Baltimore, Md.
- HARRIS, R. G. (A '07), Farming, Gray Court, S. C.
- HART, G. W. (M '96), Books and School Furnishings,
Greenwood, S. C.
- HARVEY, T. M. (M '03), Wire Chief, Southern Bell Tele-
phone Co., Charleston, S. C.
- *HAYNESWORTH, R. B. (M '03).
- HENRY, A. M. (M '04), Supt. Buckeye Cotton Oil Co.,
Little Rock, Ark.
- HENRY, D. H. (A '98), Asst. Professor of Chemistry,
Clemson College, S. C.
- HEYWARD, A. S. (M '07), General Elect. Co., 142 Ter-
race, Schenectady, N. Y.
- HICKLIN, J. W. (M '07), General Elect. Co., 142 Ter-
race, Schenectady, N. Y.
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- WOLFE, L. S., JR. (A '07), Real Estate, Orangeburg, S. C.
- WOOD, O. D. (M '07), Stanley Elect. Co., Woodlawn Inn., Pittsfield, Mass.
- WOODROOF, J. L. (C '06), Asst. Engineer, U. S. Government Service, Philippine Islands.

- WRIGHT, J. N. (M '06), Stanley Elect. Co., Pittsfield, Mass.
- WYLIE, J. C. (M '03), Electrical Draftsman, Bureau of Equipment, Navy Department, Washington, D. C.
- WYLIE, W. H., JR. (M. '07), Engineering Student, Cornell University, Ithica, N. Y.
- WYSE, F. C. (C '05), Asst. Engineer, R. & C. P. Ry. Co., Richmond, Va.
- WYSE, J. H. (C '03), Civil Engineer, Tidewater Ry. Co., Hellbend, Va.
- YOUNG, T. B. (A '03), Drug and Medicinal Plant Investigations, U. S. Dept. of Agriculture, Washington, D. C.
- ZEIGLER, M. E. (A '02), Attorney-at-Law, Orangeburg, S. C.

LIST OF GRADUATES 1907

NAME.	COURSE.	COUNTY.
W. B. Aull	Agri.	Anderson
J. B. Bailey	Mech. Elec.	Greenwood
M. H. Banks	Mech. Elec.	Orangeburg
J. H. Barksdale	Mech. Elec.	Greenwood
O. H. Bissell	Civil	Charleston
T. L. Bissell	Mech. Elec.	Charleston
L. R. Boggs	Mech. Elec.	Pickens
S. I. Bond	Agri.	Beaufort
T. N. Bristow	Mech. Elec.	Marlboro
A. K. Britt	Civil	Abbeville
J. J. Brown	Agri.	Spartanburg
A. L. Campbell	Civil	Hampton
B. D. Carter	Agri.	Colleton
J. C. Clark	Agri.	Marion
F. A. Connor	Mech. Elec.	Greenwood
E. A. Crawford	Agri.	York
H. C. Crum	Agri.	Richland
G. D. Curtis	Civil	Chatham, Ga.
R. E. Dalton	Civil	Greenville
C. E. Durant	Civil	Colleton
F. M. Dwight	Mech. Elec.	Sumter
T. D. Eason	Agri.	Charleston
R. A. Easterling	Mech. Elec.	Barnwell
A. L. Ervin	Civil	Florence
G. H. Folk	Mech. Elec.	Newberry
F. M. Furtick	Mech. Elec.	Lexington
H. E. Giles	Mech. Elec.	Greenwood
R. G. Harris	Agri.	Laurens
A. S. Heyward	Mech. Elec.	Chatham, Ga.
J. W. Hicklin	Mech. Elec.	Chester
A. V. Hooks	Civil	Horry
L. S. Horton	Mech. Elec.	Anderson
P. LaV. Howle	Agri.	Darlington

NAME.	COURSE.	COUNTY.
J. S. Hughes	Agri.	Edgefield
E. M. Kaminer	Agri.	Richland
J. W. Keel	Agri.	Barnwell
A. M. Klugh	Agri.	Greenwood
W. A. Latimer, Jr.	Civil	Chester
R. H. Lemmon	Agri.	Fairfield
H. G. Lewis	Agri.	Oconee
P. Lykes	Agri.	Richland
E. D. McCutchan	Mech. Elec.	Sumter
J. W. McLendon	Agri.	Florence
H. W. Moore	Agri.	Oconee
S. R. Perrin	Text.	Union
D. B. Peurifoy, Jr.	Agri.	Saluda
E. B. Plenge	Mech. Elec.	Charleston
C. T. Pottinger	Mech. Elec.	Chatham, Ga.
P. Quattlebaum	Mech. Elec.	Horry
O. M. Reid	Mech. Elec.	Anderson
S. F. Reid	Agri.	Abbeville
S. R. Rhodes	Mech. Elec.	Florence
R. G. Richardson	Civil	Beaufort
G. DuP. Sanders	Agri.	Barnwell
E. L. Saunders	Civil	York
W. L. Schachte	Mech. Elec.	Charleston
F. B. Schirmer	Civil	Charleston
E. M. Shingler	Civil	Charleston
W. P. Sloan	Agri.	Anderson
P. W. Spencer	Agri.	York
F. M. Stephenson	Mech. Elec.	Lancaster
W. H. Stevens	Agri.	Greenville
A. B. Taylor	Civil	Pickens
R. R. Tolbert	Agri.	Greenwood
C. W. Wannamaker	Civil	Orangeburg
W. W. Wannamaker	Agri.	Orangeburg
L. S. Wolfe, Jr.	Agri.	Orangeburg
O. D. Wood	Mech. Elec.	Greenville
W. H. Wylie, Jr.	Mech. Elec.	York

STUDENTS 1907-1908

Senior Class

NAME.	COURSE.	COUNTY.
M. H. Ackerman	Agri.	Colleton
J. E. Alverson	Mech. Elec.	Spartanburg
S. E. Bailes	Agri & Ani. Ind.	Lancaster
A. J. Baker	Agri.	Horry
A. T. Beaver	Civil	Richmond, Ga.
J. O. Bethea	Agri.	Marlboro
E. B. Brown	Agri.	Anderson
H. H. Brunson	Agri.	Orangeburg
J. M. Bryan	Civil	Charleston
R. B. Carpenter	Mech. Elec.	Pickens
C. L. Cannon	Agri.	Newberry
F. P. Caughman	Agri.	Richland
B. H. Covington, Jr.	Agri.	Marlboro
F. J. Crider	Agri.	Orangeburg
F. W. Crisp	Agri.	Laurens
E. P. Crouch	Civil	Charleston
J. H. Earle	Civil	Pickens
S. J. Ezell	Agri.	Spartanburg
B. B. Ezell	Agri.	Spartanburg
R. H. Fike	Agri. & Ani. Ind.	Spartanburg
D. P. Folk	Agri.	Bamberg
D. M. Fraser	Agri.	Barnwell
M. J. Funchess	Agri.	Orangeburg
E. V. Garrett	Civil	Laurens
W. P. Gee	Agri.	Union
J. D. Graham	Agri.	Sumter
T. Hamilton	Agri.	Hampton
J. H. Harvey	Agri.	Berkeley
D. N. Harris	Civil	Spartanburg
T. C. Heyward	Mech. Elec.	Beaufort
E. L. Hutchins	Agri.	Pickens

NAME.	COURSE.	COUNTY.
C. C. Johnson	Agri.	Spartanburg
A. G. Kennedy	Metallurgy	Union
M. R. Kimbrell	Mech. Elec.	York
W. W. Kirvin	Agri.	Darlington
W. W. Kirk	Mech. Elec.	Greenwood
J. C. LaBorde	Agri. & Ani. Ind.	Richland
A. C. Lee	Civil	York
J. W. Lewis	Agri.	Horry
J. P. Lewis	Mech. Elec.	Oconee
J. C. Littlejohn	Mech. Elec.	Union
R. B. Lowry	Agri.	Chester
W. M. Lunn	Agri.	Florence
N. Lykes	Agri.	Richland
W. A. Mace	Agri.	Marion
C. W. Marston	Agri.	Virginia
F. L. Martin	Agri.	Horry
L. E. May	Agri.	Charleston
W. H. Maynard	Agri.	Greenwood
J. M. Miller	Mech. Elec.	Lexington
C. L. McCaslan	Civil	Greenwood
C. E. McLean	Agri.	Chesterfield
C. A. McLendon	Agri.	Lee
J. McG. Napier	Agri.	Marlboro
T. L. Ogier	Agri.	Charleston
O. M. Page	Civil	Marion
J. A. Phillips	Agri. & Ani. Ind.	Orangeburg
R. O. Poag	Mech. Elec.	York
W. O. Pratt	Civil	Greenwood
C. W. Rice	Agri.	Bamberg
L. G. Richardson	Agri.	Barnwell
H. B. Riser	Mech. Elec.	Laurens
W. J. Roach	Agri.	York
T. G. Robertson	Agri.	Laurens
O. Roper	Agri.	Marlboro
W. McL. Rosborough	Mech. Elec.	Chester
W. H. Rumff	Agri.	Orangeburg

NAME.	COURSE.	COUNTY.
J. B. Ryan, Jr.	Agri.	Sumter
M. L. Sandifer	Agri.	Bamberg
W. H. Scott	Agri.	Edgefield
R. G. Sessions	Agri.	Horry
S. H. Sherard	Agri.	Greenwood
J. Spratt	Civil	Chester
G. W. Speer	Agri. & Ani. Ind.	Abbeville
C. L. Stevens	Agri.	Berkeley
H. K. Strickland	Agri.	Colleton
A. C. S. Summers	Agri.	Orangeburg
W. K. Tavel	Civil	Charleston
W. A. Thomas	Agri.	Marlboro
D. L. Tindal	Agri. & Ani. Ind.	Clarendon
C. M. Trott	Civil	Charleston
G. M. Truluck	Agri.	Sumter
Geo. Warren	Agri.	Colleton
L. O. Watson	Agri.	Greenwood
G. G. Weathersbee	Agri.	Aiken
W. N. Wells	Agri.	Lee
J. S. Wessinger	Agri.	Lexington
H. C. Wilburn	Agri. & Ani. Ind.	Union
M. G. Williams	Mech. Elec.	Pickens
F. B. Wise	Agri.	Florence

Junior Class

R. E. Adams	Civil	Edgefield
T. S. Allen	Mech. Elec.	Anderson
C. E. Baldwin	Agri. & Chem.	Greenville
G. M. Barnett	Agri. & Ani. Ind.	Oconee
G. D. Bellinger	Chem. & Geol.	Richland
D. L. Bissell	Agri. & Chem.	Charleston
R. E. Blake	Agri. & Ani. Ind.	Abbeville
J. R. Blair	Chem. & Geol.	York
L. C. Boone	Civil	Orangeburg
J. L. Boyd	Mech. Elec.	Richland
L. B. Brandon	Agri. & Ani. Ind.	York
T. L. Brice	Chem. & Geol.	Fairfield

NAME.	COURSE.	COUNTY.
D. C. Britt	Mech. Elec.	Abbeville
W. J. Brockington	Agri. & Ani. Ind.	Williamsburg
G. A. Burton	Civil	Newberry
L. P. Byars	Agri.	Marion
W. E. Campbell	Chem. & Geol.	Beaufort
J. K. Carwile	Civil	Abbeville
E. Chamnes	Mech. Elec.	Marlboro
O. M. Clark	Agri.	Lexington
W. C. Clark	Agri. & Ani. Ind.	Lee
J. S. H. Clarkson	Mech. Elec.	Richland
E. D. Clement	Agri.	Charleston
S. Coles	Agri.	Richland
L. A. Coleman	Mech. Elec.	Florence
J. C. Covington	Civil	Marlboro
R. C. Dick	Chem. & Geol.	Kershaw
W. G. Dominick	Mech. & Elec.	Newberry
J. L. Dove	Agri. & Chem.	Fairfield
J. L. Eason	Agri.	Charleston
W. J. Evans	Civil	Abbeville
F. Fleming	Agri. & Ani. Ind.	Greenville
J. T. Folk	Civil	Newberry
T. Fulmer	Mech. Elec.	Saluda
F. L. Gandy	Agri.	Darlington
E. A. Gardner	Civil	Aiken
E. E. Gary	Agri. & Chem.	Greenville
R. T. Gaston	Civil	Cherokee
P. M. Gee	Mech. Elec.	Union
J. O. Graham	Agri. & Chem.	Williamsburg
F. B. Green	Mech. Elec.	Richland
H. H. Greene	Agri. & Ani. Ind.	Abbeville
A. Grier	Mech. Elec.	Sumter
G. A. Hanna	Agri. & Chem.	Hampton
A. R. Happoldt	Mech. Elec.	Charleston
J. C. Harrison	Chem. & Geol.	Colleton
A. L. Harris	Agri. & Chem.	Spartanburg
R. A. Harris	Mech. Elec.	Laurens

NAME.	COURSE.	COUNTY.
E. C. Haskell	Mech. Elec.	Abbeville
J. L. Hawley	Civil	Fairfield
M. R. Hirsch	Mech. Elec.	Charleston
E. R. Horton	Civil	Anderson
B. G. Hunter	Mech. Elec.	Anderson
T. M. Hunter	Mech. Elec.	Newberry
W. G. Hyrne	Chem. & Geol.	Colleton
R. P. Jeter	Chem. & Geol.	Union
G. W. Keitt	Agri. & Chem.	Pickens
S. O. Kelly	Mech. Elec.	Sumter
E. S. Kohn	Mech. Elec.	Newberry
A. W. Kreamer	Civil	Pasquotank; N. C.
J. H. Lesesne	Mech. Elec.	Charleston
J. N. Loadholt	Chem. & Geol.	Barnwell
L. deB. McCrady, Jr.	Civil	Charleston
H. W. McIver	Mech. Elec.	Chesterfield
J. N. McLaurin	Agri. & Ani. Ind.	Kershaw
K. McLaurin	Agri. & Chem.	Sumter
J. P. McMillan	Mech. Elec.	Marion
P. Miley	Agri.	Hampton
J. D. Murray	Text.	Colleton
W. L. Nance	Agri. & Ani. Ind.	Laurens
W. F. Odom	Agri. & Chem.	Barnwell
S. O. Pegues	Agri.	Marlboro
C. H. Pennell	Chem. & Geol.	Abbeville
J. R. Pennell	Civil	Anderson
W. C. Pitts	Civil	Laurens
J. C. Pridmore	Agri.	Cherokee
M. Quattlebaum	Civil	Horry
R. A. Reid	Civil	Aiken
J. C. Reid	Mech. Elec.	Spartanburg
T. B. Reeves	Agri.	Laurens
H. L. Rivers	Civil	Greenwood
W. A. Robinson	Civil	Pickens
H. K. Sanders	Agri. & Ani. Ind.	Chester
W. J. Sheely	Agri. & Ani. Ind.	Newberry

NAME.	COURSE.	COUNTY.
E. H. Shuler	Mech. Elec.	Aiken
W. D. Simpson, Jr.	Civil	Anderson
J. B. Simpson	Civil	Anderson
F. W. Smith	Mech. Elec.	Marion
W. C. Spratt	Mech. Elec.	Chester
F. G. Tarbox	Agri. & Chem.	Georgetown
J. A. Teague	Text.	Laurens
H. C. Twiggs	Civil	Greenwood
D. W. Watkins	Agri. & Ani. Ind.	Anderson
F. L. Whitlock	Mech. Elec.	Chester
A. C. Whittle	Agri. & Ani. Ind.	Saluda
J. H. Wilson	Mech. Elec.	Chester
C. Y. Wigfall	Agri.	Charleston
E. H. Wood	Agri.	Cherokee
C. M. Wootan	Mech. Elec.	Chester
B. E. Wolff	Agri. & Chem.	Laurens
J. M. Wylie	Civil	York
T. H. Yeargin	Mech. Elec.	Laurens

Sophomore Class

W. Allen	Agri.	Spartanburg
W. M. Albergotti	Mech. Elec.	Orangeburg
M. W. Arthur	Mech. Elec.	Union
H. R. Bailey	Mech. Elec.	Barnwell
F. R. Baker	Civil	Charleston
P. A. Baxley	Agri. & Ani. Ind.	Barnwell
W. A. Barnette	Agri. & Ani. Ind.	York
W. D. Barnett	Text.	Oconee
D. C. Beaty	Agri.	Union
M. W. Beach	Mech. Elec.	Colleton
A. J. Becker	Agri.	Spartanburg
H. F. Bethea	Agri.	Marion
J. E. C. Bischoff	Civil	Charleston
W. C. Bolt	Agri. & Ani. Ind.	Laurens
R. E. Bowen	Agri.	Pickens
E. M. Boykin	Text.	Kershaw
B. K. Boyleston	Agri. & Ani. Ind.	Aiken

NAME.	COURSE.	COUNTY.
B. D. Boykin	Agri.	Kershaw
H. W. Brinson	Mech. Elec.	Greenwood
J. E. Brown	Mech. Elec.	Anderson
J. M. Buckner	Agri.	Barnwell
J. H. Bull	Civil	Sumter
N. E. Byrd	Civil	Orangeburg
A. M. Campbell, Jr.	Civil	Charleston
J. N. Carothers	Agri.	York
G. T. Cassells	Agri. & Ani. Ind.	Fairfield
D. B. Clayton	Mech. Elec.	Fairfield
H. R. Clinkscales	Agri.	Fairfield
I. N. Colclough	Chem. & Geol.	Clarendon
R. M. Coleman	Mech. Elec.	Fairfield
H. P. Cooper	Agri. & Ani. Ind.	Fairfield
J. W. Crawford	Agri.	Anderson
B. L. Crawford	Civil	York
W. C. Crum	Text.	Orangeburg
E. I. Davis	Mech. Elec.	Greenwood
H. S. Davis	Mech. Elec.	Charleston
O. O. Dukes	Agri. & Ani. Ind.	Dorchester
C. A. Dukes	Agri. & Ani. Ind.	Orangeburg
K. Easterling	Mech. Elec.	Marlboro
E. E. Epting	Agri.	Anderson
C. D. Evans	Civil	Abbeville
S. E. Evans	Agri. & Ani. Ind.	Clarendon
G. C. Fant	Civil	Anderson
G. T. Floyd	Civil	Williamsburg
W. A. Fridy	Agri.	Union
G. C. Furtick	Mech. Elec.	Lexington
S. B. Gandy	Agri.	Darlington
J. J. Gantt	Civil	Charleston
G. D. Garner	Agri. & Ani. Ind.	Barnwell
W. S. Goodman	Civil	Oconee
E. H. Hanna	Agri.	Hampton
D. T. Hardin	Mech. Elec.	Abbeville
W. S. Harvin, Jr.	Agri.	Clarendon

NAME.	COURSE.	COUNTY.
J. W. Harrison	Mech. Elec.	Spartanburg
B. B. Harris	Agri. & Ani. Ind.	Anderson
W. M. Haynsworth	Agri.	Florence
N. O. Head	Civil	Aiken
J. W. Henagan	Agri.	Orangeburg
R. P. Henderson	Agri. & Ani. Ind.	Greenwood
J. H. Hendricks	Civil	Pickens
W. H. Hester	Mech. Elec.	Greenwood
V. B. Higgins	Civil	Pickens
H. M. Hill	Civil	Oconee
J. L. Hill	Civil	Abbeville
W. M. Hodge	Agri.	Clarendon
T. G. Hope	Agri. & Ani. Ind.	York
O. A. Hydrick	Civil	Orangeburg
C. F. Inman	Agri.	Cherokee
J. E. Jenkins	Agri. & Ani. Ind.	Richland
S. Jordan	Mech. Elec.	Chester
F. H. Jeter	Agri.	Union
H. S. Johnson	Agri. & Ani. Ind.	Florence
J. B. Keith	Agri.	Florence
J. E. Kirby	Civil	Spartanburg
J. S. Knox	Agri.	Oconee
G. E. Lachicotte	Agri. & Ani. Ind.	Georgetown
L. L. LaRoche	Mech. Elec.	Charleston
B. Lawrence	Mech. Elec.	York
P. E. Lee	Mech. Elec.	Spartanburg
A. W. Leland	Mech. Elec.	Charleston
P. H. Lipscomb	Civil	Cherokee
L. S. Lindler	Agri.	Lexington
R. W. Lowry	Mech. Elec.	Oconee
A. McDavid	Civil	Abbeville
G. L. McCord	Mech. Elec.	Abbeville
O. P. McCord	Mech. Elec.	Greenwood
F. O. McCown	Mech. Elec.	Anderson
J. H. McDaniel	Mech. Elec.	Anderson
A. H. McDermid	Mech. Elec.	Richland

NAME.	COURSE.	COUNTY.
A. A. McKeown	Agri. & Ani. Ind.	Chester
C. McLaurin	Agri.	Sumter
J. M. Martin	Civil	Horry
H. H. Martin	Mech. Elec.	Anderson
T. L. Marion	Mech. Elec.	Chester
W. J. Marshall	Agri. & Ani. Ind.	Greenwood
L. M. Massey	Agri.	York
C. F. Middleton	Mech. Elec.	Charleston
S. L. Miller	Civil	Chester
J. C. Milling	Mech. Elec.	Greenwood
W. L. Morrison	Mech. Elec.	Charleston
O. A. Morrah	Text.	Abbeville
W. H. Morgan	Text.	Union
W. W. Newman	Mech. Elec.	Chesterfield
R. E. Nickles	Agri.	Abbeville
C. P. Norris	Civil	Anderson
B. L. Parnell	Agri.	Darlington
F. F. Parker	Mech. Elec.	Spartanburg
E. Parker	Agri.	Sumter
W. H. Phillips	Civil	Orangeburg
H. D. Plenge	Mech. Elec.	Charleston
E. H. Pinckney	Agri.	Charleston
B. F. Poe	Civil	Greenville
E. P. Porcher	Mech. Elec.	Charleston
J. S. Pyatt, Jr.	Agri.	Georgetown
A. P. Ransom	Mech. Elec.	Anderson
H. L. Reaves	Agri.	Marion
J. M. Ridgill	Agri.	Clarendon
C. M. Robbs	Civil	Cherokee
M. M. Roddy	Mech. Elec.	Chester
F. E. Rogers	Agri.	Darlington
L. D. Rogers	Agri.	Darlington
F. L. Ross	Mech. Elec.	Cherokee
G. D. Ryan	Mech. Elec.	Sumter
G. L. Salley, Jr.	Mech. Elec.	Orangeburg
T. R. Salley	Mech. Elec.	Orangeburg

NAME.	COURSE.	COUNTY.
O. T. Sanders	Agri.	Sumter
W. E. Seabrook	Mech. Elec.	Charleston
J. A. Self	Agri. & Ani. Ind.	Edgefield
M. B. Shealy	Agri.	Lexington
J. J. D. Shuler	Agri.	Lexington
K. B. Shuler	Civil	Lexington
A. F. Simpson	Mech. Elec.	Laurens
R. M. Simpson	Agri.	Chester
M. D. Sims	Mech. Elec.	York
E. N. Sitton	Mech. Elec.	Anderson
A. R. Smarr	Text.	York
C. M. Sondley	Agri. & Ani. Ind.	Abbeville
F. E. Spears	Agri. & Ani. Ind.	Union
J. T. Stephenson	Mech. Elec.	Lancaster
S. B. Sullivan	Mech. Elec.	Anderson
L. W. Summers	Agri. & Ani. Ind.	Orangeburg
E. L. Sumner	Chem. & Geol.	Darlington
F. S. Thomason	Agri.	Spartanburg
E. J. Thornhill	Agri. & Ani. Ind.	Dorchester
C. P. Townsend	Mech. Elec.	Marlboro
C. H. Trott	Civil	Charleston
M. W. Wall	Agri. & Ani. Ind.	Marion
B. Walsh, Jr.	Civil	Sumter
W. S. Walker	Agri. & Ani. Ind.	Barnwell
O. L. Walter	Mech. Elec.	Newberry
L. D. Webb	Mech. Elec.	Anderson
W. P. White	Mech. Elec.	Laurens
W. M. Wiggins	Agri. & Ani. Ind.	Marion
D. H. Wilson	Civil	Laurens
T. D. Williams	Mech. Elec.	Greenville
G. F. Wilson	Agri.	Darlington
L. T. Wyndham	Civil	Berkeley
J. Wylie	Agri.	Chester

Freshman Class

H. Acker	Agri.	Anderson
F. Adams	Agri.	Lancaster

NAME.	COURSE.	COUNTY.
L. B. Altman	Agri.	Horry
A. B. Allen	Agri.	Marion
F. H. All	Mech.	Barnwell
E. B. Antly	Mech.	Orangeburg
H. W. Anderson	Mech.	Colleton
F. T. Arnold	Mech.	Anderson
B. R. Bacot	Agri.	Charleston
J. A. Barre	Agri.	Lexington
S. E. Baxter	Agri.	Bamberg
H. C. Beaty	Text.	Georgetown
A. H. Bentley	Mech.	Greenville
E. P. Blair	Mech.	Fairfield
J. W. Blackwell, Jr.	Mech.	Darlington
C. A. Bolt	Mech.	Laurens
C. C. Burroughs	Agri.	Pickens
J. F. Boyd	Mech.	Spartanburg
H. G. Boynton	Mech.	Barnwell
L. D. Boone	Agri.	Orangeburg
S. E. Boozer	Mech.	Charleston
J. I. Bradford	Text.	Sumter
S. L. Britt	Agri.	Abbeville
R. E. Brown	Agri.	Beaufort
S. M. Browne	Mech.	Anderson
O. B. Brodie	Mech.	Oconee
N. A. Bussey	Mech.	Chester
C. E. Byrd	Mech.	Darlington
D. B. Campbell	Agri.	Beaufort
W. E. Cannon	Mech.	Spartanburg
D. A. Cannon	Mech.	Newberry
P. W. Cantwell	Mech.	Orangeburg
A. D. Chapman	Mech.	Pickens
O. R. Cohen	Mech.	Charleston
G. R. Coleman	Mech.	Edgefield
W. R. Connelly	Text.	Chester
S. M. Connor	Agri.	Colleton
E. O. Connor	Mech.	Colleton

NAME.	COURSE.	COUNTY.
L. W. Corbett	Agri.	Lee
D. H. Counts	Mech.	Laurens
W. D. Craig	Text.	Chester
J. T. Crawford	Text.	Laurens
J. I. Crowther	Mech.	Abbeville
H. W. Cromer	Agri.	Abbeville
J. C. Crouch	Text.	Saluda
J. J. Cudd	Mech.	Spartanburg
W. C. Davis	Mech.	Oconee
L. St. J. David	Mech.	Greenville
B. H. Deason	Agri.	Abbeville
F. A. DesPortes	Agri.	Fairfield
C. A. Dorrell	Mech.	Georgetown
J. L. DuBose	Agri.	Darlington
E. C. DuBose	Agri.	Lee
J. W. Duckworth	Agri.	Anderson
J. C. DuPree	Agri.	Laurens
H. C. Eagerton	Agri.	Berkeley
O. P. Earle	Mech.	Spartanburg
W. A. Edmonds	Text.	Edgefield
D. R. Ellerbee	Agri.	Florence
R. L. Ellis	Agri.	Charleston
M. B. Elkins	Mech.	Union
C. M. Emanuel	Mech.	Sumter
M. H. Epps	Text.	Florence
C. S. Evans	Agri.	Pickens
W. D. Ezell	Agri.	Spartanburg
J. F. Ezell	Agri.	Spartanburg
A. P. Fant	Mech.	Anderson
C. V. Fairy	Text.	Orangeburg
C. B. Farmer	Mech.	Barnwell
P. M. Farris	Mech.	York
K. N. Felder	Mech.	Orangeburg
J. R. Fizer	Text.	Dorchester
J. C. Fitzsimmons	Mech.	Charleston
B. P. Folk	Agri.	Newberry

NAME.	COURSE.	COUNTY.
W. Foster	Text.	Cherokee
C. J. Fort	Mech.	Cherokee
R. W. Freeman	Agri.	Darlington
M. Fudge	Mech.	Chester
H. Fulmer	Agri.	Saluda
J. W. Gantt	Agri.	Anderson
J. H. Gage	Mech.	Union
W. C. Garrett	Text.	Pickens
J. O. Garland	Mech.	Clarendon
B. W. Gettys	Agri.	Kershaw
J. M. George	Mech.	Anderson
A. E. Gilmore	Agri.	Union
J. L. Gilmore	Agri.	Berkeley
C. R. Gillam	Mech.	Bamberg
F. Gilmer	Mech.	Greenville
W. N. Ginn	Mech.	Hampton
J. A. Goodwin	Agri.	Greenville
W. R. Gray	Agri.	Laurens
O. H. Graham	Agri.	Williamsburg
P. P. Gregorie	Mech.	Charleston
H. Green	Mech.	Sumter
I. H. Grimball	Mech.	Charleston
P. S. Hale	Mech.	Charleston
C. M. Hall	Mech.	Anderson
H. G. Hamlin	Mech.	Anderson
W. H. Hanckel	Mech.	Charleston
J. G. Harris	Agri.	Laurens
H. W. Harvey	Agri.	Berkeley
L. C. Harrison	Mech.	Oconee
T. Harris	Text.	York
L. H. Hardin	Mech.	Cherokee
L. C. Haskell	Agri.	Abbeville
W. N. Henderson	Agri.	Fairfield
W. W. Herbert	Agri.	Newberry
W. F. Hodge	Agri.	Clarendon
W. H. Howey	Agri.	Lancaster

NAME.	COURSE.	COUNTY.
J. J. Hunter	Agri.	Laurens
J. H. Hydrick	Mech.	Orangeburg
G. G. Inman	Agri.	Cherokee
H. H. Jacobs	Mech.	Richland
J. E. Jenkins	Agri.	Berkeley
E. S. Jenkins	Agri.	Charleston
E. P. Josey	Agri.	Darlington
T. M. Johnston	Agri.	Kershaw
W. S. Jones, Jr.	Agri.	Sumter
H. O. Kaigler	Mech.	Lexington
R. B. Kay	Mech.	Pickens
L. Kay	Mech.	Pickens
W. D. Keasler	Agri.	Anderson
J. F. Keel	Agri.	Barnwell
C. E. Kitchens	Mech.	Chester
H. D. Kirby	Mech.	Spartanburg
B. T. Knight	Text.	Chesterfield
J. G. Lawton	Mech.	Hampton
J. K. Lawton	Mech.	Hampton
J. T. Lazar	Mech.	Barnwell
R. Lebby	Mech.	Charleston
W. M. Lenoir, Jr.	Mech.	Sumter
C. F. Lokey	Text.	Anderson
C. F. Lunz	Mech.	Charleston
F. W. Lykes	Text.	Richland
C. S. Lykes	Agri.	Richland
E. A. McCreary	Mech.	Aiken
G. McGregor	Mech.	Anderson
R. J. McIntosh	Mech.	Richland
L. C. McLure	Mech.	Chester
M. A. McCown	Mech.	Anderson
R. H. McFadden	Agri.	York
D. M. Mackintosh	Mech.	Charleston
J. H. Mappus	Agri.	Charleston
T. S. Marshall	Mech.	Greenwood
G. L. Marshall	Agri.	Greenwood

NAME.	COURSE.	COUNTY.
C. V. May	Agri.	Colleton
E. D. Mays	Mech.	Greenwood
A. W. Meredith	Text.	Anderson
W. Mickle	Agri.	Kershaw
W. B. Miley	Mech.	Colleton
S. A. Miller	Mech.	Richland
D. B. Miller	Mech.	Richland
J. E. M. Mitchell	Mech.	Charleston
W. Morrall	Mech.	Colleton
R. Morrison	Mech.	Chester
J. M. Muirhead	Text.	Charleston
J. Nance	Mech.	Newberry
E. W. Nettles	Agri.	Darlington
C. W. Neyle	Agri.	Charleston
W. S. Nicholson	Text.	Union
T. P. Nisbet	Agri.	Lancaster
R. A. Opt	Text.	Anderson
B. F. Owens	Agri.	Barnwell
C. A. Parks	Agri.	Edgefield
J. P. Parks	Agri.	Laurens
L. B. Parris	Agri.	Spartanburg
A. B. Parker	Mech.	Sumter
W. C. Patrick, Jr.	Agri.	Hampton
F. W. Perrin	Agri.	Union
W. G. Perry, Jr.	Mech.	Greenville
H. B. Pitts	Agri.	Sumter
H. T. Prosser	Agri.	Williamsburg
F. M. Rast	Agri.	Orangeburg
T. C. Redfern	Agri.	Oconee
W. H. Rentz	Mech.	Hampton
F. L. Reese	Mech.	Abbeville
W. T. Reeves	Mech.	Fairfield
J. W. Rhyne	Agri.	Cherokee
B. T. Rice	Agri.	Barnwell
C. P. Rice	Agri.	Greenville
J. A. Riley	Text.	Bamberg

NAME.	COURSE.	COUNTY.
F. W. Risher	Mech.	Colleton
H. F. Rivers	Mech.	Charleston
A. M. Robertson	Mech.	Abbeville
J. H. Rodger	Mech.	Newberry
W. S. Rogers	Mech.	Richland
A. M. Salley	Agri.	Orangeburg
T. B. Sandifer	Mech.	York
C. A. Sanders	Agri.	Colleton
F. B. Schachte	Mech.	Charleston
R. W. Scott	Agri.	Edgefield
F. E. Schroder	Mech.	Charleston
A. C. Shell	Mech.	Laurens
J. F. Sherard	Mech.	Greenwood
J. T. Shirley	Agri.	Anderson
J. A. Simpson	Mech.	Anderson
L. B. Smith	Agri.	Spartanburg
L. A. Smoak	Agri.	Orangeburg
E. A. Sompayrac	Mech.	Darlington
J. E. Steadman	Mech.	Bamberg
W. J. Stevenson	Agri.	Fairfield
R. G. Stevens	Text.	Greenville
J. P. Stickley	Agri.	Beaufort
L. S. Stokes	Agri.	Orangeburg
F. F. Stokes	Agri.	Greenville
W. E. Stokes	Mech.	Bamberg
R. A. Stribling	Mech.	Oconee
J. W. Stuckey	Agri.	Sumter
J. M. Sturdivan	Mech.	Greenville
M. S. Swygert	Agri.	Laurens
G. Thompson	Mech.	Marlboro
Guy Thompson	Agri.	Anderson
L. P. Tobin	Mech.	Barnwell
G. C. Trantham	Agri.	Kershaw
S. G. Venning	Mech.	Charleston
H. E. Vincent	Agri.	Hampton
J. B. Wakefield	Mech.	Abbeville

NAME.	COURSE.	COUNTY.
H. S. Wakefield	Mech.	Abbeville
R. H. Walker	Mech.	Barnwell
W. J. Wannamaker	Mech.	Orangeburg
G. H. Warner	Mech.	Greenwood
J. B. Washington	Mech.	Orangeburg
E. W. Webb	Mech.	Greenwood
M. S. Webb	Mech.	Charleston
J. L. Welborn	Agri.	Anderson
G. D. Westerland	Mech.	Bamberg
J. J. Wheeler	Mech.	Saluda
L. E. Wheeler	Mech.	Saluda
F. P. Wichman	Mech.	Colleton
P. Williford	Mech.	Anderson
J. M. Wilkinson	Agri.	Abbeville
J. A. Willoughby	Mech.	Florence
F. A. Williford	Mech.	Anderson
L. M. Williford	Mech.	Anderson
J. O. Wingard	Text.	Lexington
R. S. Wolfe	Mech.	Orangeburg
H. M. Woodward	Mech.	Barnwell
W. B. Wright	Mech.	Fairfield
E. E. Wyndham	Mech.	Berkeley
K. M. Yoder	Agri.	Lancaster

Preparatory Class

S. S. Abell	Chester
E. L. Allen	Spartanburg
R. B. Alverson	Union
I. S. Anderson	Colleton
J. T. Armstrong	Laurens
R. O. Atkinson	Chester
T. E. Bell	Lee
G. D. Blackwell	Edgefield
O. M. Blanton	Horry
K. W. Boggs	Pickens

NAME.	COUNTY.
I. P. Bolt.....	Anderson
R. A. Bolt.....	Anderson
E. T. Boulware.....	Fairfield
J. R. Boulware.....	Fairfield
C. C. Boyleston.....	Aiken
L. L. Boyleston.....	Aiken
J. M. Bradberry.....	Abbeville
W. B. Britt.....	Abbeville
J. L. Brown.....	Oconee
G. W. Byars.....	Cherokee
R. H. Cain.....	Florence
J. C. Caldwell.....	Chester
H. G. Carson.....	Orangeburg
H. S. Clarke.....	Florence
J. T. Cochran.....	Pickens
M. L. Cooper.....	Fairfield
R. S. Creech.....	Barnwell
E. Cromer.....	Anderson
F. L. Dalton.....	Greenville
O. M. Doyle.....	Pickens
E. Durant.....	Clarendon
R. E. Edwards.....	Orangeburg
F. T. Ellenberg.....	Abbeville
R. G. Erwin.....	Anderson
J. P. Fellers.....	Newberry
J. B. Ferguson.....	Chester
W. H. Ferguson.....	Chester
L. S. Finklea.....	Florence
P. Gaillard.....	Berkeley
S. Gandy.....	Darlington
L. J. Goodman.....	Oconee

NAME.	COUNTY.
J. R. Griffis.....	Edgefield
M. Hamer	Marlboro
R. A. Hamilton.....	Chester
G. W. Hairston.....	Newberry
H. H. Harvey.....	Berkeley
J. H. Hayden.....	Orangeburg
C. J. Hayden.....	Orangeburg
J. J. Hayden.....	Orangeburg
H. A. Heriot.....	Lee
W. C. Hicklin.....	Chester
I. K. Hicklin.....	Chester
J. T. Hiers.....	Colleton
L. Holliday	Greenville
W. Holliday	Greenville
C. T. Hutto.....	Orangeburg
J. L. Kee.....	Chester
J. H. Keel.....	Aiken
T. A. Kirby.....	Cherokee
W. B. Knox.....	Oconee
C. T. Latimer.....	Abbeville
S. I. Lenoir.....	Sumter
E. B. Lindler.....	Lexington
G. E. Lomax.....	Abbeville
R. D. McFaddin.....	Clarendon
T. S. Moore.....	Oconee
B. F. Parks.....	Edgfield
B. F. Pennell.....	Abbeville
W. C. Petrie.....	Spartanburg
M. M. Reames.....	Sumter
A. E. Schilletter.....	Oconee
B. A. Shuler.....	Orangeburg

NAME.	COURSE.	COUNTY.
W. R. Simmons.....		Laurens
G. Z. Smith.....		Anderson
E. L. Stevenson.....		Fairfield
B. C. Truluck, Jr.....		Florence
F. J. Ville Ponteaux.....		Berkeley
S. M. Webb.....		Saluda
J. H. S. Wessinger.....		Lexington
J. A. White.....		Oconee
J. W. Morrah.....		Abbeville
S. E. Wheeler.....		Clarendon

Special Student

W. B. Aull (B. S. Clem. Col.)..	Agr. & Chem....	Anderson
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Two-Year Course Textile Students

T. L. Alford, first year.....	Marion
J. E. Brown, first year.....	Richland
D. L. Boulware, first year.....	Laurens
A. H. Cottingham, first year.....	Marion
G. F. Garlington, second year.....	Spartanburg
L. C. Langston, first year.....	Laurens
J. H. Lokey, second year.....	Anderson
L. E. McAlpine, first year.....	Fairfield
J. H. Rhyne, second year.....	Cherokee
L. S. Sitton, first year.....	Anderson
H. M. Turner, second year.....	Laurens
J. W. Waldrop, first year.....	Newberry

Students in Cotton Grading

T. L. Alexander.....	Oconee
J. B. Hemingway.....	Williamsburg
J. E. Moore.....	Oconee

Irregular Student

J. L. Marshall.....	Mech. Elec.....	Greenwood
---------------------	-----------------	-----------

SUMMARIES

By Classes

Seniors	90
Juniors	102
Sophomores	158
Freshmen	241
Preparatory	82
Special	1
Short Course Textile	12
Irregular	1
Students in Cotton Grading	3
Total	690

By States

South Carolina	687
Georgia	1
Virginia	1
North Carolina	1
Total	690

By Counties in South Carolina

Abbeville	32
Aiken	10
Anderson	50
Bamberg	9
Barnwell	21
Beaufort	5
Berkeley	11
Charleston	51
Cherokee	15
Chester	31
Chesterfield	4

Clarendon	11
Colleton	18
Darlington	16
Dorchester	3
Edgefield	10
Fairfield	19
Florence	13
Georgetown	5
Greenville	17
Greenwood	23
Hampton	10
Horry	8
Kershaw	8
Lancaster	6
Laurens	29
Lee	7
Lexington	14
Marion	11
Marlboro	12
Newberry	16
Oconee	20
Orangeburg	36
Pickens	18
Richland	18
Saluda	7
Spartanburg	26
Sumter	22
Union	19
Williamsburg	7
York	19

Total, South Carolina 687

INDEX

	PAGES
Academic department	118
Admission of students	24
Agricultural buildings	64
Agricultural courses	30- 37
Agricultural department	91
Agricultural scholarships	55
Agricultural equipment	69
Agricultural instruction	93
Alumni, 1896-1907, list of.....	168- 195
Alumni organizations	167
Analyses, information, etc.....	147
Animal industry course.....	34
Animal industry and dairying equipment.....	72
Animal industry and dairy instruction.....	99
Athletics	138
Bacteriology and botany equipment.....	72
Bacteriology and botany instruction.....	100
Barracks	61
Band	17
Board of Health.....	12
Board of Trustees.....	4
Board of Visitors.....	6
Botany and bacteriology equipment.....	72
Botany and bacteriology instruction.....	99
Buildings and grounds.....	59- 68
Bulletins, Experiment Station.....	147
Bulletins, Popular Science.....	148
Cadet Band	17
Cadet Exchange	138
Calendar	3
Calhoun mansion	67
Calhoun relics	88
Care of the sick.....	135
Chapel services	133
Chemical buildings	67
Chemical department	109
Chemistry and metallurgy equipment.....	80

	PAGES
Chemistry and metallurgy instruction.....	109
Civil engineering course.....	40, 41
Civil engineering equipment.....	87
Civil engineering instruction.....	122
Clemson pictures	88
Clemson's will	149
College officers	12
Committees of the Board.....	5
Committees of the Faculty.....	4
Courses of study.....	30- 43
Course I. Agriculture	30, 31
Course Ia. Agriculture and chemistry.....	32, 33
Course II. Agriculture and animal industry.....	34, 35
Course III. Chemistry and geology.....	36, 37
Course IV. Mechanical and electrical engineering.....	38, 39
Course V. Civil engineering	40, 41
Course VI. Textile industry	42, 43
Special and irregular courses.....	44- 48
Dairying and animal industry equipment.....	72
Dairying and animal industry instruction.....	99
Degrees, medals and honors.....	51
Departments of the College.....	91
Agricultural department	93
Mechanical and electrical department.....	102
Chemical department	109
Textile department	111
Academic department	118
Military department.....	125
Preparatory department	48
Descriptions of courses of instruction.....	93- 126
Donations to the College.....	140
Drawing and designing equipment.....	77
Drawing and designing instruction.....	105
Electrical engineering course.....	39
Electrical engineering equipment.....	73
Electrical engineering instruction.....	102
English	118
Entomology and Zoology equipment.....	72
Entomology and Zoology instruction.....	98
Entrance examinations	28
Entrance requirements	26

	PAGES
Equipment for practical instruction.....	68- 88
Exchange	138
Expenses and fees.....	53
Experiment Station and inspection work.....	147
Experiment Station staff.....	13
Faculty	7- 10
Farmers' institutes	148
Fees and expenses.....	53
Field day	140
Forge and foundry equipment.....	78
Forge and foundry instruction.....	106
Free tuition	55
General information	128- 146
General regulations	131
Geology and chemistry course.....	36, 37
Geology and mineralogy equipment.....	69
Geology and mineralogy instruction.....	94
Government of the College.....	129
Grades, reports and promotions.....	49
Graduates, 1896-1907, list of.....	168- 195
Grounds and buildings.....	61
Heat, light and water.....	68
Historical sketch of the College.....	21- 24
History and political economy.....	119
Honors, degrees and medals.....	51
Horticulture equipment	64
Horticulture instruction	96
Hotel and residences.....	67
Inspection officers	13
Inspection and Experiment Station work.....	147
Irregular courses	48
Laboratory and shop equipment.....	68- 88
Laws relating to the College.....	152- 166
Leaves of absence.....	131
Lecture course	138
Library	88
Light, heat and water.....	68
List of graduates, 1896-1907.....	168- 195
List of graduates, 1907.....	196
List of students, 1907-1908.....	198
Literary societies	136

	PAGES
Location of the College.....	21
Machine shop equipment.....	78
Machine shop instruction.....	107
Main building	61
Mathematics	120
Mechanical and electrical buildings.....	66
Mechanical and electrical department.....	102
Mechanical and electrical engineering course.....	39
Mechanical and electrical equipment.....	73
Mechanical engineering equipment.....	76
Mechanical engineering instruction.....	103
Medals, degrees and honors.....	51
Military department	125
Military science and tactics.....	125
Mineralogy and geology equipment.....	69
Mineralogy and geology instruction.....	94
Ministers for session 1907-1908.....	14
Officers of the College.....	12
Oratorical Association, State.....	137
Organization and government of the College.....	129
Physics equipment	77
Physics instruction	104
Political economy and history.....	119
Popular science bulletins.....	148
Preparatory course	48
Prescribed courses of study.....	30- 43
Publications by students.....	137
Regimental organization	15, 16
Regulations, general	131
Regulations governing athletics.....	138
Religious exercises	133
Reports, grades and promotions.....	49
Reports to parents.....	3, 49
Requirements for admission.....	26
Residences and hotel.....	67
Scholarships, agricultural	55
Science Club	137
Shop and laboratory equipment.....	68- 88
Sick, care of.....	135
Societies, literary	136
Soil physics equipment.....	70

	PAGES
Soil physics instruction.....	93
Special courses	44
State Chemist and inspection officers.....	13
State Oratorical Association.....	137
Student labor	130
Students, 1907-1908, list of.....	198
Summaries by classes, states and counties.....	218
Sunday school	133
Textile building	67
Textile industry course.....	42, 43
Textile industry equipment.....	32
Textile industry instruction.....	111
Tuition, fees, etc.....	53
Veterinary science equipment.....	71
Veterinary science instruction.....	97
Water, light and heat.....	68
Woodwork equipment	79
Woodwork instruction	107
Young Men's Christian Association.....	133
Zoology and entomology equipment.....	72
Zoology and entomology instruction.....	98

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Woodwc
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Zoology

CATALOGUE
OF THE
CLEMSON
AGRICULTURAL COLLEGE
OF SOUTH CAROLINA

STATE AGRICULTURAL AND MECHANICAL COLLEGE

POST OFFICE: CLEMSON COLLEGE

TELEGRAPH, EXPRESS AND FREIGHT OFFICES: CALHOUN

1908=1909

SIXTEENTH YEAR

ANNOUNCEMENTS 1909-1910

PRINTED AT CLEMSON COLLEGE PRINTERY,
CLEMSON COLLEGE, S. C., 1909

COLLEGE CALENDAR.

Session 1909-1910.

1909

- Sept. 8-13. Examinations for admission and for removal of conditions.
Sept. 8. Opening of the 17th session; exercises begin at 8:40 A. M.
Nov. 25. Thanksgiving day: a holiday.
Dec. 23. First day of Christmas recess.

1910.

- Jan. 3. Beginning of the Second Term, 8:40 a. m.
Jan. 19. Lee's Birthday; annual public exercises of the Columbian Literary Society in the evening.
Feb. 22. Washington's Birthday: a holiday.
Annual public exercises of the Palmetto Literary Society in the evening.
Mar. 1. Stated meeting of the Board of Trustees.
Mar. 18. Calhoun's Birthday: a holiday.
March. 25. Annual public exercises of the Calhoun Literary Society in the evening.

1910.

- March. 21. Beginning of the Third Term, 8:40 a. m.
May. 1. A holiday.
Annual track and field athletic contests.
June 5. Beginning of commencement exercises; baccalaureate sermon.
June 6. Address of alumni orator.
Contest of literary society representatives.
Military exercises and graduation parade.
June 7. Commencement Day; address to the graduating class.
Graduating exercises; delivery of diplomas.
July 12. Stated meeting of Board of Trustees.

Reports to Parents.

Reports of class standing and discipline will be sent to parents for periods ending on the following dates:

October 30, and December 17,* 1909; February 4, March 11,* April 22, and May 27,* 1910.

Dates marked with an asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

Quarterly Dues.

Payable September 8, November 10, 1909; January 26, March 31, 1910.

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Term Expires 1910.

HON. W. D. EVANS,.....Cheraw, Marlboro Co.
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 HON. IVY M. MAULDIN,.....Pickens, Pickens Co.

Term Expires 1912.

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 HON. COKE D. MANN,....West Union, Oconee Co.

*Deceased.

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Executive Committee

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Finance Committee

Messrs. Simpson, Donaldson, Johnstone, Mauldin,

Committee on Fertilizer Control

Messrs. Evans, Wannamaker, Tillman, Mann, Richards.

Experiment Station Committee

Messrs. Tillman, Wannamaker, Donaldson, Evans, Mann,
Rawl.

Farmers' Institute Committee

Messrs. Simpson, Johnstone, Donaldson, Evans, Tillman,
Rawl.

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Messrs. Donaldson, Wannamaker, Mauldin.

Veterinary Inspection Committee

Messrs. Johnstone, Mann, Mauldin, Richards.

Committee on Coast Experiments

Messrs. Wannamaker, Evans, Tillman, Donaldson, Mann,
Rawl.

Campus Committee

Messrs. Tillman, Bradley, Mell.

Farm Committee

Messrs. Rawl, Bradley, Evans.

Library Committee

Messrs. Bradley, Mauldin.

Barracks Management and Student Funds Committee

Messrs. Evans, Donaldson, Mann.

Miscellaneous Appropriation Committee

Messrs. Johnstone, Tillman, Evans, Simpson, Richards.

Board of Visitors for the Sesssion 1909—1910

Meeting First Wednesday in May.

First District—HON. D. MCKAY FROST, Charleston, S. C.

Second District—HON. J. L. QUINBY, Graniteville, S. C.

Third District—HON. J. K. DURST, Greenwood, S. C.

Fourth District—HON. STOBO J. SIMPSON, Spartanburg, S. C.

Fifth District—HON. EDWARD McIVER, Cheraw, S. C.

Sixth District—HON. DAVID R. COKER, Hartsville, S. C.

Seventh District—HON. A. F. LEVER, Peake Station, S. C.

FACULTY*

PATRICK HUES MELL, PH. D., LL. D.
President

Agricultural Department

DAVID NICHOLAS BARROW, B. S.

Director of Department,
Professor of Agriculture.

FRED HARVEY HALL CALHOUN, PH. D.
Professor of Geology and Mineralogy.

M. RAY POWERS, D. V. S.
Associate Professor of Veterinary Science.

DAVID OLIVER NOURSE, B. S.
Associate Professor of Animal Husbandry and Dairying.

CHARLES HOUSTON SHATTUCK, PH. D.
Associate Professor of Botany and Forestry.

GEORGE GOODING AINSLIE, B. S. A.
Associate Professor of Zoology and Entomology.

JUNIUS MILTON BURGESS, B. S.
Assistant Professor of Agriculture and Animal Husbandry.

ROBERT OLIVER FEELEY, D. V. S.
Assistant in Veterinary Science

*The names of the faculty, after that of the President, are arranged in groups in each department: Professors, Associate Professors, Assistant Professors, and Instructors, in the order of their respective appointments.

The Engineering Department.

WALTER MERRITT RIGGS, E. M. E.

Director of Department,
Professor of Mechanical and Electrical Engineering

HALE HOUSTON, C. E.,

Professor of Civil Engineering

SAMUEL BROADUS EARLE, A.M., M.E.

Associate Professor of Mechanical Engineering

THOMAS GRAYSON POATS, M.E., E. E.

Associate Professor of Physics.

RUDOLPH EDWARD LEE, B.S.

Associate Professor of Drawing.

JOHN HILLIARD HOOK, B.S.

Assistant Professor of Woodwork.

WILLISTON WIGHTMAN KLUGH, B. S.

Assistant Professor of Drawing.

FRANK TOWNES DARGAN, M. S.

Assistant Professor of Electrical Engineering.

JOHN WEEMS GANTT.

Assistant Professor of Forge and Foundry Work.

STYLES TRENTON HOWARD, B. M. E.

Assistant Professor of Machine Work.

FRANK BOGARD, B. M. E.

Instructor in Drawing.

THOMAS HARRIS BURRUSS, JR., B. S.

Instructor in Drawing.

ANDREW BURCHELL GARDNER.

Assistant in Woodwork.

ZACK ROBERT LEWIS

Assistant in Forge and Foundry Work

Department of Chemistry

MARK BERNARD HARDIN

Director of Department,

Professor of Chemistry.

RICHARD NEWMAN BRACKETT, A. B., PH. D.

Associate Professor of Chemistry.

DAVID HILL HENRY, B. S.

Assistant Professor of Chemistry.

ROBERT ANDERSON HALL, Ph. D.

Assistant Professor of Chemistry.

BENJAMIN FREEMAN, * B. S.

Assistant in Chemistry.

Department of Textile Industry.

CHARLES STEBBINS DOGGETT

Director of Department,

Professor of Textile Chemistry and Dyeing.

CLAUDE WIGHTMAN McSWAIN, B. S.

Assistant Professor of Weaving and Designing.

DRAYTON EUGENE EARLE, B. S.

Assistant Professor of Carding and Spinning.

Academic Department.

CHARLES MANNING FURMAN, A. B.

Professor of English.

WILLIAM SHANNON MORRISON, A. B.

Professor of History and Political Economy.

SAMUEL MANER MARTIN, B. S.

Professor of Mathematics.

DAVID WISTAR DANIEL, M. A.

Associate Professor of English.

AUGUSTUS SHANKLIN, B. S.

Secretary of the Faculty

Associate Professor of Mathematics.

THOMAS WADLINGTON KEITT

Assistant Professor of English.

ARTHUR BUIST BRYAN, B. S., B. Litt.

Assistant Professor of English.

JOSEPH EVERETT HUNTER, B. S.

Assistant Professor of Mathematics.

MARK EDWARD BRADLEY, A. B.

Assistant Professor of English.

BURR HARRISON JOHNSTONE, A. B.

Assistant Professor of Mathematics.

ANDREW BRAMLETT, B. S.*

Assistant Professor of Mathematics.

ALESTER GARDEN HOLMES, B. S.

Assistant Professor of History.

W H MILLS, †

Military Department

JOSIAH C MINUS**

Captain U. S. Army, Commandant of Cadets,

Professor of Military Science and Tactics.

Preparatory Department

LAWRENCE ANDREW SEASE, B. S.

Assistant Professor of English,

Headmaster of Preparatory Department.

* Acting Commandant.

** Resigned.

† Temporarily in place of Professor Bramlett, who is acting Commandant.

Standing Committees of the Faculty.

The President is *ex officio* a member of each committee.

The first named in each instance is chairman.

Discipline Committee.

President Mell, Professors Hardin, Furman, Riggs, Morrison,
Calhoun, Doggett, Barrow, Martin, Houston.

Committee on Examinations.

Professors Furman, Morrison, Riggs, Calhoun, Hunter,
Bramlett, Sease.

Schedule Committee.

Professors Morrison, Brackett, Furman, Riggs, Lee, Doggett,
Martin, Nouse, Powers.

Library Committee.

Professors Bryan, Calhoun, Doggett, Earle, S. B., Henry.

Committee on Preparatory Department.

Professors Furman, Morrison, Sease, Hunter.

Committee on Irregular Students.

Professors Houston, Klugh, Earle, D. E., Howard, Burgess.

Committee on Chapel Services.

Professors Earle, S. B., Lee, Keitt, Bradley, Brackett.

Committee on Chapel Music.

Professors Riggs, Hook, Bryan, Daniel.

Committee on Lectures and Lyceum.

Professors Daniel, Martin, Klugh, Houston, Dargan.

Committee on Extension Work.

Professors Hardin, Riggs, Doggett, Barrow.

Committee on Alumni.

Professors Lee, Henry, Bryan, Burgess.

Committee on Athletics.

Professors Riggs, Daniel, Shanklin, Calhoun, Gantt, Poats.

Catalogue Committee.

Professors Earle, S. B., Brackett, McSwain, Shanklin, Powers.

Museum Committee.

Professors Calhoun, Shattuck, Ainslie.

Students Publication Committee.

Professors Keitt, Bradley, Johnstone, Hall.

Student Entertainment Committee.

Professors Riggs, Henry, Hunter, Holmes, Commandant.

Officers of the College

PATRICK HUES MELL, PH. D., LL. D.

President,

JOSIAH C. MINUS*

Captain U. S. Army

Commandant.

ALEXANDER MAY REDFERN, B. S., M. D.

Surgeon.

AUGUSTUS SHANKLIN

Secretary of Faculty.

PAUL HAMILTON EARLE SLOAN, M. D.

Treasurer and Secretary Board of Trustees.

HUGH MILTON STACKHOUSE

Secretary Board of Fertilizer Control.

WILLIAM CALVIN TUCKER

Bookkeeper.

SAMUEL WILDS EVANS

Assistant Bookkeeper.

HAROLD GUERRY

Secretary to the President

MISS KATHERINE BOCQUET TRESHOT

Librarian.

MISS ETTA M. SADLER

Stenographer to Agricultural Department.

MISS MARGARET L. SADLER

Stenographer to Mechanical Department.

MISS M. E. GASQUE,

Assistant to Secretary Board of Fertilizer Control.

JOHN NATHAN HOOK

Justice Clemson College Corporation.

JAMES PERCIVAL LEWIS

Superintendent of College Farm.

AUGUST SCHILLETER

Steward.

J. M. GASQUE

Assistant to Commandant.

J. S. GOODMAN

In Charge of Construction and Repairs.

Board of Health

President MELL, Doctors REDFERN and SLOAN, Professors
HARDIN, HARPER, BARROW, and BARNETT.

* Resigned

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION.

Station Staff.

JOSEPH NELSON HARPER, B. S., M. S. A.

Director and Agriculturist.

CHARLES CARTER NEWMAN, B.S.

Horticulturist.

HENRY WALTER BARRE, B.S.

Botanist and Plant Pathologist.

ALBERT FREDERIC CONRADI, B.S.A., M.S.

Entomologist and Zoologist.

THOMAS ELLISON KEITT, B.S.

Chemist.

ENOCH BARNETT, D.V.M.,

Veterinarian and Animal Husbandman.

JOHN NATHAN HOOK

Secretary and Librarian.

WILLIAM D. GARRISON, B.S.

Superintendent Coast Land Experiment Station.

MISS HELEN BRADFORD

Stenographer.

BURNS GILLISON

Foreman Experiment Station Farm.

Chemists of Fertilizer Control.

M. B. HARDIN, Chief Chemist.

B. F. ROBERTSON, B. S. Chemistry.

J. H. MITCHEL, M. S. Assistant Chemistry.

C. V. W. CORNELL, B. S. Assistant Chemistry.

L. O. WATSON, B. S. Assistant Chemistry.

State Control Officers*

PROF. M. B. HARDIN, State Chemist.

W. A. THOMAS, B. S. State Entomologist.

DR. M. RAY POWERS, State Veterinarian.

DR. R. O. FEELY, Assistant Veterinarian.

*Appointed by the Board of Trustees under the State laws requiring them to carry on the work indicated.

Ministers for Session 1908-1909.

- Sept. 13. Rev. J. H. Graves, Clemson College, S. C.
 Sept. 20. Rev. W. H. Mills, Clemson College, S. C.
 Sept. 27. Rev. L. E. Hubbard, Clemson College, S. C.
 Oct. 4. Rev. S. L. Templeman, Richmond Va.
 Oct. 11. Rev. L. E. Hubbard, Clemson College, S. C.
 Oct. 18. Rev. W. H. Mills, Clemson College, S. C.
 Oct. 25. Rev. J. H. Graves, Clemson College, S. C.
 Nov. 1. Rev. W. H. Mills, Clemson College, S. C.
 Nov. 8. Rev. L. E. Hubbard, Clemson College, S. C.
 Nov. 15. Rev. W. H. Mills, Clemson College, S. C.
 Nov. 22. Rev. J. H. Graves, Clemson College, S. C.
 Nov. 29. Rev. J. H. Harmes, Newberry, S. C.
 Dec. 6. Rev. W. H. Mills, Clemson College, S. C.
 Dec. 13. Rev. L. E. Hubbard, Clemson College, S. C.
 Dec. 20. Rev. T. V. McCaul, Orange, Va.
 Jan. 10. Rev. L. E. Hubbard, Clemson College, S. C.
 Jan. 17. Rev. W. H. Mills, Clemson College, S. C.
 Jan. 24. Rev. J. H. Graves, Clemson College, S. C.
 Jan. 31. Rev. C. A. Miller, Charleston, S. C.
 Feb. 7. Rev. Edward Fullenweider, Newberry, S. C.
 Feb. 14. Rev. L. E. Hubbard, Clemson College, S. C.
 Feb. 21. Rev. W. H. Mills, Clemson College, S. C.
 Feb. 28. Rev. Geo. T. Harmon, Williamston, S. C.
 Mar. 7. Rev. D. G. Phillips, Newberry, S. C.
 Mar. 14. Rev. L. E. Hubbard, Clemson College, S. C.
 Mar. 21. Rev. W. H. Mills, Clemson College, S. C.
 Mar. 28. Rev. J. H. Graves, Clemson College, S. C.
 Apr. 4. Rev. J. H. Graves, Clemson College, S. C.
 Apr. 11. Rev. W. H. Mills, Clemson College, S. C.
 Apr. 18. Rev. L. E. Hubbard, Clemson College, S. C.
 Apr. 25. Rev. J. H. Harmes, Newberry, S. C.
 May 2. Rev. C. A. Freed, Columbia, S. C.
 May 9. Rev. L. E. Hubbard, Clemson College, S. C.
 May 16. Rev. W. H. Mills, Clemson College, S. C.
 May 23. Rev. J. H. Graves, Clemson College, S. C.
 May 30. Rev. W. A. Hillar, Columbia, S. C.
 June 6. Baccalaureate Sermon—Rt. Rev. W. A. Guerry, Charles-
 ton, S. C.

BATTALION ORGANIZATION.

APRIL 14, 1909.

Commandant of Cadets.

CAPTAIN JOSIAH C. MINUS,

Sixteenth Infantry, United States Army, Retired.

Battalion Staff.

B. E. Wolff.....First Lieutenant and Adjutant
 A. L. Harris.....Second Lieutenant and Quartermaster

Non-Commissioned Staff

S O. PeguesSergeant Major
 T. R. Salley.....Quartermaster Sergeant
 O. A. HydrickColor Sergeant
 C. M. Robbs.....Color Sergeant

MAJOR O. M. CLARKE

COMPANY "A"

COMPANY "B"

COMPANY "C"

Captains

Byars, L. P.

Hyrne, W. G.

Sanders, H. K.

Lieutenants.

Whittle, A. C.

Folk, J. T.

Blair, J. R.

Jeter, R. P.

Coles, S.

Fleming, F.

First Sergeants

Baker, F. R.

Marshall, W. J.

Barnett, W. A.

Sergeants

Henderson, R. P.

Hill, J. L.

Simpson, R. M.

Lee, P. E.

McLaurin, C.

Reaves, H. L.

Tarbox, F. G.

Roberts, C. P.

Clinkscales, H. R.

McCown, F. O.

Baxley, P. A.

Corporals

Altman, L. B.

Marshall, T. S.

Connelly, W. R.

Jenkins, J. E.

Boone, L. D.

Garner, G. D.

Harrison, L. C.

Jenkins, Jno. E.

McCord, G. L.

Jenkins, E. S.

Beaty, H. C.

Osborne, W.

Venning, S. G.

Brodie, O. B.

Lykes, F. W.

COMPANY "D"

Pridmore, J. C.

Barnett, G. M.

Reeves, T. B.

White, W. P.

Barnett, W. D.

Martin, E. C.

Sumner, E. L.

Shuler, J. D.

Salley, A. M.

Crawford, J. T.

Lawton, J. K.

Gilmer, F. V.

Wiggins, W. M.

COMPANY "E"

Captains

Dominick, W. G.

Lieutenants

Baldwin, C. E.

Gee, P. M.

First Sergeants

Furtick, G. C.

Sergeants

LaRoche, L. L.

Simms, M. D.

Albergotti, W. M.

Buckner, J. M.

Corporals

Britt, S. L.

Henderson, W. N.

Gettys, B. W.

Goodwin, J. A.

Walker, R. H.

COMPANY "F"

McIver, H. W.

Graham, J. O.

Brandon, L. B.

Summers, L. W.

Stevenson, J. T.

Middleton, C. F.

Floyd, G. T.

Johnson, H. S.

Schroeder, F. E.

Epps, M. H.

Perry, W. G.

Woodward, H. M.

Garrett, W. C.

Cadet Band

E. A. Von Bruggman.....	<i>Director</i>
W. Allen.....	<i>Drum Major</i>
A. McDavid.....	<i>Sergeant</i>
T. D. Williams.....	<i>Corporal</i>
R. S. Wolfe.....	<i>First B b Clarinet</i>
T. A. Jeffords.....	<i>Second B b Clarinet</i>
A. McDavid.....	<i>Solo B b Cornet</i>
V. B. Higgins.....	<i>First B b Cornet</i>
T. D. Williams.....	<i>Second B b Cornet</i>
N. E. Byrd.....	<i>Solo E b Alto</i>
E. H. Pinckney.....	<i>First E b Alto</i>
W. A. Robinson.....	<i>Second E b Alto</i>
L. D. Webb.....	<i>First Tenor</i>
J. R. Lomax.....	<i>Second Tenor</i>
H. D. Plenge.....	<i>Baritone</i>
E. A. McReary.....	<i>Tuba</i>
J. D. Graham.....	<i>Snare Drum</i>
P. L. Bissell.....	<i>Bass Drum</i>
D. L. Bissell.....	<i>Cymbals</i>

LOCATION AND HISTORICAL SKETCH
ADMISSION AND COURSES OF STUDY

Location

The College is located on the old Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is also connected by local telephone with neighboring towns in adjoining counties, and by telegraph and long distance telephone with all parts of the country. The postoffice is conveniently situated on the campus, and receives five daily mails.

Historical Sketch

The College is the outcome of a movement for the establishment of an Agricultural College by a convention of farmers of the State in 1886. The first step toward the realization of this project was taken by the Hon. Thomas G. Clemson, who, upon his death in 1888, bequeathed to the State the old Fort Hill homestead, the former home of John C. Calhoun, and other securities to the value of \$58,539, "for the establishment of an Agricultural College." The estate included about eight hundred acres of land and the historic old Calhoun residence, which is now carefully preserved on the College campus. This bequest was accepted

by the State Legislature in an Act which became a law in November, 1889.

The College was opened on the 6th day of July, 1893, and 446 students were enrolled during the first session. These were classified as sophomores, freshmen, and higher and lower preparatory. The Trustees having decided that sessions should begin on the third Thursday in February and end on the third Thursday in December, the first session was only about five and a half months long. On this account the students were continued in the same classes throughout the second session,—February to December, 1894,—and the enrollment increased to 635. On the night of May 22, 1894, the main building was burned, but the regular exercises were not interrupted, and the only summer vacation consisted of a week's encampment at Spartanburg in July.

During the third session, February to December, 1895, there were 370 students in attendance, with the former sophomores advanced to the junior class. There was a recess of two weeks in the latter part of July, and the session was closed on December 7th. The enrollment during the fourth session, February to December, 1896, was 350, and the first commencement exercises were held on December 13 to 16, 1896, with a graduating class of 37, 15 in the agricultural course and 22 in the mechanical-electrical. The fifth session opened in the regular way, on the third Thursday in February, 1897. At a meeting of the Trustees in July, it was decided to open the College on the 14th of September, and that henceforth the sessions should begin regularly on the second Wednesday in September and close on the second Wednesday in June. The exercises of the second commencement, which would normally have occurred in December, 1897, were held on February 6 to 9, 1898. The graduating class numbered 25, 13 in the agricultural course and 12 in the mechanical-electrical. The under-graduate classes were continued until June and the total enrollment for

this long session (February, 1897, to June, 1898) was 449. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, although the closing day was afterward changed to first Tuesday, instead of second Wednesday. During the sixth session, 1898-1899, the enrollment was 446, and the graduating class numbered 16, 6 in the agricultural course, 6 in the mechanical-electrical, and 4 in the civil engineering. The textile department was first opened for students at the beginning of this session, in September, 1898. During the seventh session, 1899-1900, 461 students matriculated, and the class of 1900 numbered 28, including 12 in the agricultural course, 6 in the mechanical-electrical, 6 in the civil engineering, and 4 in the textile.

Beginning with the eighth session, 1900-1901, preparatory instruction was restricted to a one-year course, thus abolishing the lower preparatory class. During the session 483 students were enrolled, and the graduating class numbered 31, including 9 in the agricultural course, 11 in the mechanical-electrical, 2 in the civil engineering, and 9 in the textile. In the ninth session, 1901-1902, 500 students matriculated and 59 were graduated, including 12 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 17 in the textile. The enrollment during the tenth session, 1902-1903, was 539, and the graduating class numbered 60, including 6 in the agricultural course, 28 in the mechanical-electrical, 5 in the civil engineering, and 21 in the textile.

In the eleventh session, 1903-1904, 605 students were enrolled, and the graduating class numbered 39, including 4 in the agricultural course, 28 in the mechanical-electrical, 2 in the civil engineering, and 5 in the textile.

A gold medal was awarded to the mechanical, electrical, civil, and textile exhibit at the St. Louis Exposition.

A bronze medal was awarded to the agricultural department for the preservation of the sweet potato.

In the twelfth session, 1904-1905, 673 students were enrolled, and the graduating class numbered 39, including 5 in the agricultural course, 20 in the mechanical-electrical, 8 in the civil, 5 in the textile, and 1 in the metallurgical course.

In the thirteenth session, 1905-1906, 652 students were enrolled, and the graduating class numbered 59, including 16 in the agricultural course, 20 in the mechanical-electrical, 15 in the civil, and 8 in the textile course.

In the fourteenth session, 1906-1907, 658 students were enrolled, and the graduating class numbered 69, including 28 in the agricultural course, 25 in the mechanical electrical, 15 in the civil, and 1 in the textile course.

In the fifteenth session, 1907-1908, 690 students were enrolled, and the graduating class numbered 85, including 60 in the agricultural courses, 12 in the mechanical-electrical, 12 in the civil, and 1 in the metallurgical course.

The total number of graduates to June, 1908 was 554.

Admission of Students

Every candidate for admission must be at least sixteen years of age.

Students desiring to enter college should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 14th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College

subject to their passing the required examinations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases, including consumption.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class

(b) As between applicants of equal preparation, the oldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other States may be admitted, and when so admitted, may continue in College until they complete their course.

(f) Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the President's office and matriculate before they will be assigned to quarters in the barracks. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of the fees. (See page 54.)

Matriculation is equivalent to a pledge to conform to the rules and regulations of the College.

Entrance Requirements

For admission into the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography, and history of the United States.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with the ordinary principles and operations of arithmetic. Wentworth's Practical Arithmetic is recommended as a suitable text-book.

Algebra—The detailed requirements are as follows: Definitions and notation, fundamental operations, including laws of signs, and the interpretation of negative results; use of parenthesis; factoring; highest common factor; lowest common multiple; single and complex fractions; simple integral and fractional equations with one unknown number, and problems leading to such equations; simultaneous equations of the first degree, with applications to solution of problems; involution of monomials, and polynomials; evolution of monomials and polynomials; theory of exponents with applications; radicals, including solution of equations involving rationalization; simple operations with imaginary expressions; pure and affected quadratic equations containing one unknown number, with application to problems.

The student should cover carefully the whole ground here specified, and should acquire a clear understanding not only of algebraic processes, but of the principles and reasons involved in every operation. Students fail on entrance examinations more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book.

A satisfactory treatment of the topics in algebra may be found in Wentworth's New School Algebra (used in the public schools).

English.—Applicants are examined in spelling, sen-

tence analysis, and oral reading; and are required to write short essays on an assigned subject.

Geography.—Applicants must possess a fair knowledge of general geography, such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography, or other standard text-books of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and positions of the continents, and locations of the principal mountains, plateaus, river basins, and costal lowlands; influences of land forms and climate upon the life and industries of the inhabitants; locations and outlines of important countries, particularly those of America and Europe, and of the States in the United States; locations of great cities in all countries, and conditions favorable to the growth of cities.

History.—A School History of the United States, by White, is the text-book recommended. Any other school history may be used in place of the one named.

Entrance Examinations

Entrance Examinations are held during the first week of the opening of the session, September 8 to 13, 1909, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules, beginning at 9 a.m.:

FOR ADMISSION TO THE FRESHMAN CLASS.

Arithmetic—Wednesday, September 8, 1909.

Algebra—Thursday, September 9, 1909.

English—Friday, September 10, 1909.

Geography—Saturday, September 11, 1909,

History—Monday, September 13, 1909.

FOR ADMISSION TO THE PREPARATORY CLASS.

Arithmetic—Wednesday, September 8, 1909.

English—Thursday, September 9, 1909.

Geography—Friday, September 10, 1909

Upon passing satisfactorily the required examinations, the Committee on examinations furnishes the applicant with a certificate to that effect, and upon presentation of this certificate at the President's office he is assigned to the class recommended by the Committee.

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study schedule on the following pages. Such applicants should report with other new students during the regular examination period and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

Examinations for admission into the beneficiary scholarships established at the recent session of the Legislature are held by the various county boards of education, and can not be given at the College. For further particulars in regard to these scholarships, see page 56.

Prescribed Courses of Study

As briefly described and tabulated on the following pages, seven regular four-year courses are offered, each leading to graduation with the degree of Bachelor of Science (B. S.,) the course pursued being designated on the diploma.

The three agricultural courses are alike in the freshman and sophomore years, and agricultural students are, therefore, required to choose between these at the beginning of the junior year. The other four courses are alike during the first two

years, and choice between them is made at the beginning of the junior year. The descriptions accompanying the detailed schedules of studies in the various courses are intended to aid the student in arriving at an adequate estimate of the scope and purposes of each course, in order that he may the more intelligently choose between them.

In all the courses, two hours practical work in shop, laboratory, or field, are regarded as equivalent to one hour of "theoretical" work, or recitations, as no outside preparation is required for practical work, and the exercises are completed in the periods assigned in the curriculum.

Change from one course to another is not permitted except upon approval of the Faculty. Any student desiring to change his course of study must submit a written application to the President for such change within thirty days from the date of his matriculation for the current session.

When change is made at beginning of sophomore year, from one of the engineering courses to the agricultural course or from the agricultural to one of the engineering courses, the student is required to make up the equivalent of three practical hours per week for a year in whatever subject the director of the department shall specify.

COURSE I. AGRICULTURE

This is a broad educational course, covering the whole field of natural sciences that are tributary to the agricultural industry, together with a liberal amount of mathematics, English, physics, history and political economy, and a maximum amount of chemistry.

This division of the original course into (1) Agriculture and Horticulture, (2) Agriculture and Chemistry, and (3) Agriculture and Animal Industry, described on the following page, has been made in order to afford opportunity for election in these lines. In this course the student is given more special training in agriculture, horticulture, chemistry botany, bacteriology, and entomology; and thus is laid a foundation upon which he may readily specialize in any of these branches after graduation. The student is well equipped to take up farming, gardening, or fruit-growing as an occupation, or for the pursuit of investigational work in the United States Department of Agriculture or the various State experiment stations.

Each of the agricultural courses forms an excellent foundation for the study of other professions, particularly that of medicine.

COURSE I. AGRICULTURE.

Freshman Class.

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520, 221)....	5	5	5	Wood Work (271).....	2	2	2
English (501).....	5	5	5	Freehand Drawing (240)...	3	3	3
History (511-513) ...	3	3	3	Botany (171).....	3	3	3
Agriculture (100).....	-	-	2	Mechanical Drawing (243).	2	2	2
Botany (171).....	2	2	-	Forge Work (252).....	2	2	2
				Drill (602).....	3	3	3

Sophomore Class.

Mathematics (522)	5	-	-	Chemistry (301).....	3	3	3✓
English (502).....	3	3	3	Agr. Survey (101).....	-	3	3
Chemistry (300).....	3	3	3	Zoology (140).....	3	6	-
Agriculture (101).....	-	-	2	Entomology (141).....	-	-	4
Physics (231-233).....	2	3	3	Agriculture (101).....	-	-	2
Agr. Survey (101)	-	3	-	Histology (172,174) . . .	6	-	-
German (540,541)	2	3	4	Drill (602).....	3	3	3

Junior Class.

English (503).....	2	2	2	Chemical Lab. (305)	3	3	3
History (514).....	2	2	2	Horticulture (121).....	2	3	2
Chemistry (304).....	2	2	2	Farm Mechs. (102,103)....	-	-	5
Horticulture (120).....	2	2	2	Dairying (162).....	3	-	-
Live Stock (150-152)	-	2	2	Forestry (173,175).....	4	4	-
Dairying (161).....	2	-	-	Live Stock (154).....	-	2	2
Agriculture (102).....	-	2	2	Drill (602).....	3	3	3
Vet. Science (130,131).....	2	2	2				
Forestry (173).....	2	-	-				
Military	1	1	1				

Senior. Class.

Political Economy (515)...	3	2*	-	Agriculture (104,105).....	4	7	4
English (504).....	-	2	3	Horticulture (122).....	2	2	2
Agriculture (104,105).....	3	6	2	Stock Feeding (160).....	3	3	-
Live Stock (157,158,153)...	2	2	2	Bacteriology (142)	3	-	-
Geology (111,112)....	2	2	2	Botany (176).....	-	-	3
Horticulture (122)	2	2	3	Thesis (106)	-	-	3
Bacteriology (142).....	2	-	-	Drill (602).....	3	3	3
Botany (176).....	-	-	2				
Military	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

COURSE II. AGRICULTURE AND CHEMISTRY.

This is a differentiation of the original course in Agriculture for the purpose of affording students specially interested in chemistry, mineralogy and bacteriology an opportunity to receive more instruction in these subjects than is offered by the other agricultural courses. There is a growing demand for well-trained chemists, and the students who propose to select the profession of chemistry will find that this course is well arranged to give them a good foundation in the science and at the same time furnish them a liberal education.

COURSE II. AGRICULTURE AND CHEMISTRY.

The Freshman and Sophomore years are identical with Course I.

Junior Class.

Hours per week			Hours per week		
First term			First term		
Second term			Second term		
Third term			Third term		
THEORETICAL			PRACTICAL		
English (503).....	2	2 2	Chemistry (305)	6	6 6
History (514).....	2	2 2	Mineralogy (111).....	2	2 -
Chemistry (304).....	2	2 2	Forestry (173,175).....	4	4 -
Mineralogy (111).....	2	2 4	Horticulture (121).....	-	- 3
Forestry (173).....	2	2 -	Agriculture (102).....	-	- 3
Military (600).....	1	1 1	Drill (602).....	3	3 3
Horticulture (120).....	2	- 2			
Agriculture (102).....	-	2 2			
Stock Breeding (150,152)..	2	- -			

Senior.

Political Economy (515)...	3	2*-	Chemical Lab. (305).....	6	6 6
English (504).....	-*	2 3	Agriculture (105).....	-	- 3
Chemistry (304).....	2	2 2	Horticulture (122).....	-	- 3
Horticulture (122).....	2	2 -	Bacteriology (142).....	4	3 -
Agriculture (104).....	2	- 2	Stock Feeding (160).....	-	3 -
Geology (111,112).....	3	4 3	Botany (176).....	-	- 3
Bacteriology (142).....	2	2 -	Drill (602).....	3	3 3
Botany (176).....	-	- 2			
Stock Feeding (157,158)...	-	2 2			
Military (601).....	1	1 1			

COURSE III. AGRICULTURE AND ANIMAL INDUSTRY.

This is a differentiation of the original Course in Agriculture for the purpose of affording students specially interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential, studies have been omitted; but mathematics is retained through the second year, and a special course in rural engineering put in the third year. English, history and civics are retained throughout the course. Drawing the first year, physics the second year, geology the last year, and chemistry the last three years, but slightly reduced and changed to meet the demands of this new course. Botany, bacteriology, zoology and entomology are so planned as to begin the first year of the course and thereby contribute to clearer knowledge of farm crops, live stock, dairying, sanitation and animal diseases. General agriculture is taught during the first two years, horticulture the third and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breeds of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding, care and management of flocks and herds. In the dairy course are taken up the production, handling, manufacture and marketing of whole milk, cream, ice-cream, butter and cheese.

COURSE III. AGRICULTURE AND ANIMAL INDUSTRY.

The Freshman and Sophomore years are identical with Course I.

Junior Class.

Hours per week			Hours per week		
First term			First term		
Second term			Second term		
Third term			Third term		
THEORETICAL			PRACTICAL		
English (503).....	2	2 2	Chemistry (305)	3	3 3
History (514).....	2	2 2	Horticulture (121).....	2	2 -
Forestry (173).....	2	- -	Farm Mechs. (102,103)	-	- 5
Chemistry (304).....	2	2 2	Dairying (162).....	3	3 -
Horticulture (120).....	2	- 2	Forestry (173).....	4	- -
Agriculture (102).....	-	2 2	Live Stock (154).....	-	2 2
Dairying (161).....	2	2 -	Vet. Science (132,133).....	-	2 2
Live Stock (150,152)	-	2 2	Drill (602).....	3	3 3
Vet. Science (130,131).....	2	2 2			
Military Science (600).....	1	1 1			

Senior.

Political Economy (515)...	3	2*-	Live Stock (160).....	3	3 -
English (504).....	-*	2 3	Vet. Science (136).....	3	3 3
Live Stock (157,155,153)...	4	2 2	Bacteriology (143).....	3	3 -
Vet. Science (134,135)....	2	2 3	Thesis	-	- 3
Geology (111,112).....	1	2 2	Horticulture (122).....	-	3 3
Bacteriology (143).....	2	2 -	Agriculture (105).....	3	- 3
Agriculture (104).....	2	2 2	Drill (602).....	3	3 3
Horticulture (122).....	-	2 2			
Military (601) Science.....	1	1 1			

*Political Economy ends and Senior English begins at middle of second term.

COURSE IV. CHEMISTRY AND GEOLOGY

This course is intended to equip the student for engaging in manufacturing operations involving metallurgy or other branches of inorganic chemistry, or for employment as assayer or chemist in connection with mining operations. It also furnishes a basis upon which he may readily specialize in mining or geology, with a view to conducting actual mining enterprises or to employment in responsible positions on state or national surveys.

The student is well grounded in the principles of chemistry, physics, mechanics, geology and mineralogy, but the principal stress is laid on geology and metallurgical chemistry. He also acquires a valuable practical knowledge of surveying, mechanical engineering, foundry practice, drawing and designing, in addition to the pursuit of courses in English, history, political economy, and other subjects of general educational value.

The first two years of the course are the same as in the engineering courses. The third and fourth years differ chiefly in the substitution of advanced work in chemistry and metallurgy, and in geology and mineralogy for the higher mathematics and technical engineering work.

For further particulars see the detailed descriptions of subjects tabulated on the opposite page

COURSE IV. CHEMISTRY AND GEOLOGY.**Freshman Class.**

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520, 521)....	5	5	5	Wood Work (270).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (240)...	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)...	3	3	3
Agriculture (101).....	2	2	2	Forge Work (250).....	3	3	3
				Drill (602).....	3	3	3

Sophomore Class.

Mathematics (5224-5).....	5	3	3	Foundry (251)	2	3	3
English (502).....	3	3	3	Pattern Making (272).....	2	3	3
History (514).....	2	2	2	Mechanical Drawing (284)...	2	2	2
Chemistry (300).....	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (230)	-	2	2	Descriptive Geometry (230)	3	-	-
Surveying (231)	-	2	2	Surveying Field (231)	-	2	2
				Drill (602).....	3	3	3

Junior Class.

English (503).....	2	2	2	Assaying (303).....	2	2	2
Chemistry (302).....	2	2	2	Chemical Lab. (303)	4	4	4
Mineralogy (111).....	2	2	2	Mineralogical Lab. (111)...	2	2	2
Geology (113)	4	4	4	Mechanical Drawing (247)...	2	2	2
Physics (231)	2	2	2	Physical Lab. (232).....	2	2	2
Mechanism (220)	2	-	-	Drill (602).....	3	3	3
Mechanics (221)	-	2	2				
Military Science (600)	1	1	1				

Senior Class.

English (504).....	-*	2	3	Chemical and Metallurgi- cal Laboratory (311)	6	6	6
Political Economy (515)...	3	2*	-	Practical Geology (116)...	3	3	3
Chemistry (306).....	2	2	2	Mechanical Lab, (215)	3	3	3
Metallurgy (310)	2	2	3	Drill (602).....	3	3	3
Economic Geology (115) ..	2	3	4				
Petrography (114)	2	2	2				
Mechanical Eng. (213)....	3	3	-				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING

This course is designed to fit young men for responsible positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually soon distances his uneducated competitors in the acquirement of practical knowledge and experience.

While devoting considerable time to purely technical work, it is recognized that to obtain the best ultimate result, the student should be given a thorough training in the English language and as broad and liberal a culture as the time available and his previous preparation will permit. Seeking in some degree to attain this end, such studies as history, English literature, civics, economics, geology and botany are taught in the course, as well as the partly technical sciences, mathematics, physics, and chemistry.

Within the department are taught physics, mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in laboratories equipped with the best modern apparatus.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but rather men capable of directing enterprises into which these trades enter as component parts, and to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the

course, including instruction in freehand drawing in the first year, mechanical drawing during the first three years, and machine design in the fourth year.

Graduates from this course are filling responsible positions in various lines of mechanical and electrical engineering and in drawing.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING

Freshman Class.

	Hours per week				Hours per week		
	First	Second	Third		First	Second	Third
THEORETICAL				PRACTICAL			
Mathematics (520,521)	5	5	5	Woodwork (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511,513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab (301)	3	2	2
Physics (230)	2	2	2	Descriptive Geom (230)	3	—	—
Surveying (231)	—	2	2	Surveying Field (231)	—	2	2
				Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	5	5	5	Mechanical Drawing (245)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (231)	2	2	2	Physical Lab. (232)	3	3	3
Electrical Eng. (200)	3	3	3	Electrical Lab. (201)	3	3	3
Mechanism (210)	2	—	—	Drill (602)	3	3	3
Mechanics (211)	—	2	2				
Military Science (600)	1	1	1				

Senior Class.

English (504)	—	2*	3	Machine Shop (261)	3	3	3
Political Economy (515)	3	2*	—	Machine Design (238)	3	3	3
Electrical Eng. (202)	5	5	5	Electrical Lab. (203)	3	3	3
Mechanical Eng. (213)	3	3	5	Mechanical Lab. (214)	3	3	3
Mechanics (212)	2	2	—	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term. ■ Note.—Practical work of Freshman and Sophomore classes subject to rearrangement as to hours per term.

COURSE VI. CIVIL ENGINEERING

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics and the physical sciences. The course will also be found to embrace the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets, and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

For fuller details, see descriptions of instruction in these subjects.

COURSE VI. CIVIL ENGINEERING.

Freshman Class.

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520, 521)....	5	5	5	Wood Work (270).....	3	3	3
English (501).....	5	5	5	Freehand Drawing (240)...	3	3	3
History (511-513) ...	3	3	3	Mechanical Drawing (242).	3	3	3
Agriculture (101).....	2	2	2	Forge Work (250).....	3	3	3
				Drill (602).....	3	3	3

Sophomore Class.

Mathematics (522-4-5).....	5	3	3	Foundry (251)	2	3	3
English (502).....	3	3	3	Pattern Making (272).....	2	3	3
History (514).....	2	2	2	Mechanical Drawing (244a).	2	2	2
Chemistry (300).....	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (230)	2	2	2	Descriptive Geometry (230)	3	-	-
Surveying (231)	-	2	2	Surveying Field (231)	-	2	2
				Drill (602).....	3	3	3

Junior Class.

Mathematics (525,527).....	5	5	5	Mechanical Drawing(246)..	3	3	3
English (503).....	2	2	2	Machine Shop (260).....	3	3	3
Physics (231)	2	2	2	Physical Lab. (232).....	2	2	-
Civil Engineering (232,234)	3	3	3	Civil Eng. Field (232-4)...	4	4	3
Mechanism (210).....	2	-	-	Mineralogical Lab. (110)...	-	-	3
Mechanics (211)	-	2	2	Drill (602).....	3	3	3
Military Science (600)	1	1	1				

Senior Class.

English (504).....	-	2*	3	Mechanical Drawing (249).	3	3	3
Political Economy (515)...	3	2*	-	Mechanical Lab, (214)	3	3	3
Civil Engineering (236-8)..	5	5	5	Civil Eng. Field (236-8) ...	6	6	6
Mechanical Eng. (213)....	3	3	5	Drill (602).....	3	3	3
Mechanics (212).....	2	2	-				
Geology (112)	1	2	1				
Military Science (601).....	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

COURSE VII. TEXTILE INDUSTRY.

This department was established primarily to direct young men in their study of the textile fibres, to teach their manipulation, and the after processes of manufacture required by the trade.

The principles underlying the art of manufacture are taught by lecture, text-book and experiment; skill is acquired by intimate contact with the machinery equipment, which consists of various types of machines designed by the prominent builders of cotton machinery in this country.

The aim has been to arrange a course in which the student will be allowed the opportunity of acquiring a good general education along with this special training in textiles. For this reason, in order to allow time to be devoted to culture studies, and to instruction in the general principles of the sciences involved in manufacture, the course does not follow special lines closely until the junior year.

During the junior and senior years, in which more time is devoted to textile subjects, the student is brought face to face with facts and conditions, from the proper observation and study of which he may obtain information and experience that would take him years to acquire in the mills.

This course does not presume to fit one for the management of a mill, but is intended to give the student a broad foundation on which to specialize, and the graduate is in possession of such information, and has acquired such experience and knowledge in handling raw materials and manufacturing machinery as, if supplemented by energy, application and tact, will soon lead to rapid advancement in the special line of work taken up.

COURSE VII. TEXTILE INDUSTRY.

Freshman Class.

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520,521)	5	5	5	Woodwork (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab (301)	3	2	2
Physics (230)	2	2	2	Descriptive Geom (230)	3	-	-
Surveying (231)	-	2	2	Surveying Field (231)	-	2	2
				Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	5	5	5	Machine Shop (260)	3	3	3
English (503)	2	2	2	Chem. Lab. (303)	3	3	-
German (540)	2	2	2	Dyeing Lab. (420)	-	-	3
Textile Chemistry (420)	-	-	2	Weaving (410,411)	3	3	3
Designing (412)	3	2	-	Carding and Spin'g (400,406)	3	3	3
Carding and Spin'g (400,406)	1	1	1	Drill (602)	3	3	3
Mechanism (210)	2	-	-				
Mechanics (211)	-	2	2				
Military Science (600)	1	1	1				

Senior Class.

English (504)	-	2*	3	Mechanical Lab. (215)	-	3	3
German (541)	2	2	2	Cam Drawing (249a)	2	-	-
Political Economy (515)	3	2*	-	Carding and Spin'g (407,409)	3	2	3
Mechanical Eng. (213)	3	3	-	Dyeing (421)	4	4	3
Carding and Spin'g (407,409)	2	2	2	Weaving (410,411)	4	4	4
Textile Chemistry (421)	2	2	2	Military Drill (602)	3	3	3
Designing (412)	2	2	2				
Cloth Analysis (414)	-	1	1				
Jacquard Designing (413)	-	-	2				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

Special Courses

Besides students in the usual undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of the course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of the uniform and board in barracks.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical. No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on elementary mechanical drawing, physics and chemistry, and on mathematics, through plane trigonometry. They will be expected to take with the *junior class*, in addition to their electrical studies, physics,

mechanics, mathematics, mechanical drawing and machine shop work. Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the *senior class*, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing and machine design.

Students who are not prepared, or are not willing to take the other subjects necessary to successful study of electrical engineering, will not be permitted to take a special course in this line.

Special Cotton Grading Course

This course begins with the winter term, January 5, 1910, and continues for six weeks. All of the important cottons of the world are studied, but most of the practice is with the various varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. These students are given the results of experiments made by the textile students with various grades.

Instruction is also given by notes and text-book. Elementary bookkeeping and warehouse accounting is included in this course.

Text-books: Dabney's "The Cotton Plant"; C. P. Brooks' "Cotton."

Special Textile Course

To meet the demands of Southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course, as scheduled and described on the preceding pages.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, and is thoroughly practical and allows a greater portion of the student's time to be devoted to the pursuit of textiles in its several branches.

To pursue this course successfully the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 8 to 13, 1909, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. They will not be required to perform military duty, but will be subject to the general rules and regulations of the College. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

COURSE OF STUDY.

FIRST YEAR.	Hours Per Week.		
	1st Term.	2nd term.	3rd term.
Mathematics (begin Algebra).....	5	5	5
Freshman English.....	5	5	5
Carding and Spinning (theory)...	2	2	2
Carding and Spinning (practical) .	3	3	3
Mechanical Drawing.....	3	3	3
Designing.....	3	3	3
Weaving.....	6	6	6
Freehand Drawing.....	3	3	3
	30	30	30

SECOND YEAR.

Mathematics (complete Geometry) .	5	0	0
Sophomore English.....	3	3	3
Chemistry.....	3	3	3
Carding and Spinning (theory)...	2	2	2
Carding and Spinning (practical) .	6	6	6
Chemical Laboratory.....	2	2	2
Designing.....	2	3	3
Cloth Analysis and Jacquard			
Designing.....	2	3	3
Weaving.....	5	8	8
	30	30	30

Special Post Graduate Textile Course

This course is, in general, a continuation of the regular course with the addition of such subjects as will lead to a proper understanding of industrial affairs. Frequent discussion of the subjects treated, and wide reading on assigned topics will be special features of the course. The subjects taken up will include combing, mule spinning, mill construction and organization, assembling of machinery, Jacquard weaving, building of Jacquard harnesses, loom fixing, designing, dyeing, manufacture and technical analysis of chemicals and other products used in the textile industry, and sociology in so far as it touches upon mill life, welfare work and labor problems.

TWO YEAR AGRICULTURAL COURSE.

First Year.

Hours per week			Hours per week				
First term Second term Third term			First term Second term Third term				
THEORETICAL			PRACTICAL				
Mathematics.....	3	3	3	Live Stock (154).....	-	2	2
English.....	3	3	3	Wood Work (271).....	-	3	-
Live Stock (150,152).....	-	2	2	Vet. Science (136).....	3	3	3
Vet. Science (137).....	2	2	2	Agronomy (102).....	3	2	3
Farm Machinery (103).....	3	-	-	Farm Machinery (103)	3	-	-
Agronomy(102).	2	3	3	Entomology (144)	-	-	2
Entomology (144) ..	-	-	2	Horticulture (111).....	3	2	2
Horticulture (110).....	2	2	-	Drill (602).....	3	3	3

Second Year.

English.....	3	3	3	Forge Work (261)	-	3	3
Mathematics.....	3	3	3	Agronomy (104)	2	3	3
Stock Breeding (153).....	2	-	-	Stock Feeding (160).....	-	-	3
Stock Feeding (157,158)....	-	-	3	Dairying (162)	-	3	3
Dairying (161).....	-	2	2	Farm Accounts (108)	3	-	-
Physiography (109).....	-	2	2	Botany (177,178).....	4	3	-
Agronomy (104).....	3	2	2	Farm Surveying (102).....	3	-	-
Farm Accounts (108).....	2	-	-	Drill (602).....	3	3	3
Botany (177,178).....	2	3	-				

Irregular Courses

Every student is required to pursue one of the regular courses, as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.

2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Courses

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home then he must stand his examination for one of the College classes, and failing to pass the required exam-

ination for the freshman class, will not be allowed to enter the preparatory class, but must return home.

The instruction in this department is under the immediate supervision of the professors of English, mathematics, history, and geology in the College, and is closely articulated with the work of the advanced classes.

The course of study is as follows:

Arithmetic, 5 hours a week.

Algebra, 5 hours a week.

Grammar and Composition, 5 hours a week.

Reading and Spelling, 5 hours a week.

Geography, 2 hours a week.

History, 3 hours a week.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course the next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Reports, Grades and Promotions

Reports of class-standing and discipline are sent to parents at intervals of approximately one month throughout the session. During 1909-1910 these reports will be made up for the periods ending on the following dates, and will usually be mailed to parents about one week later: October 30th and December 17th,* 1909; February 4th, March 11th,* April 22nd and May 27th,* 1910. Dates marked with the asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

The session is divided into three terms, ending December 23d, 1909, March 18th and June 5th, 1910, respectively. Examinations are held at the close of each term, and reports are sent to parents, giving the results of these exami-

nations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent., on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

No student is entitled to a second examination in any subject, except by special permission of the Faculty. In case of only one or two failures such permission is usually granted, provided the student's record indicates a reasonable degree of application to his studies.

Students whose conditions have not been removed by the opening of the next session will be required to take the work of the preceding year over, unless for special reasons an extension of time is allowed.

Students who are taking over the work of any year in a regular course, or those who for any reason have been put back from a higher to a lower class, are required to take the full work of that class.

A student taking any subject over waves the right to all previous records in that subject, and is placed upon the same footing as students taking the work for the first time.

Parents will be advised to withdraw students who habitually shirk duties.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make an average grade of 90 per cent. or over for any session are designated as *distinguished*: provided, however, that the mini-

mum grade on any subject shall not be less than 80 per cent. Their names are published in the Catalogue of the succeeding year. This honor was won in 1908 by G. W. Keitt, of the Junior class, and A. McW. Salley, of the Freshman class.

Trustees' Medal.—The board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1908 by S. H. Sherrard, '08.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won in 1908 by G. W. Keitt, '09, Calhoun; S. J. Ezell, '08, Columbian; I. G. Richardson, '08, Palmetto.

In oratory, by T. C. Heyward, '08, Calhoun; G. Warren, '08, Columbian; S. E. Bailes, '08, Palmetto.

In declamation, by J. C. Harrison, '09, Calhoun; D. L. Tindal, '08, Columbian; H. W. Cromer, '12, Palmetto.

The Chronicle Medals.—*The Chronicle*, the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

The Colors of Battalion are awarded at the close of each session to the best drilled battalion, and are carried by it during the succeeding session. In June, 1908, this distinction was won by the First Battalion, C. A. McLendon, the Cadet Major.

A Blue Silk C. A. C. Flag is awarded June of each year to the best drilled company, and carried by it during the succeeding year. This was won in June, 1908, by company "B", D. N. Harris, Captain.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1908 by Cadet W. M. Wall, Class of '11.

Norris Medal.—"I give \$500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it '*Honos habet onus*' (Honors bring responsibilities)."

Two medals were awarded in 1908; one to C. A. McLendon, '08 and one to W. P. Gee, '08.

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the *Official Army Register* of the succeeding year.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States Army.

Second Lieutenancy United States Army.—General Orders, No. 39, War Department, contains the following paragraph:

"The reports of the regular inspections of the colleges and schools to which officers of the army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the general staff for its critical examination, and the chief of staff will report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in

the regular army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men."

The term "honor graduate" signifies any graduates who would rank as one of the first five of his class.

Fees and Expenses

The regular fees and charges for the session of 1909-1910 will be as follows:

Incidental fee,.....	\$ 5 00
Medical fee.....	5 00
Uniform.....	*23 35
Khaki uniform.....	5 20
Board and washing.....	76 52
Breakage fee.....	3 00
Tuition.....	40 00
Total.....	<u>\$158 07</u>

These charges must be paid in quarterly installments as follows:

September 8, 1909	\$70 68
November 10, 1909	29 13
January 26, 1910	29 13
March 30, 1910.....	29 13

Remittances should be made in cash, or by money order or New York exchange—*not by local check*—to Dr. P. H. E. Sloan, Treasurer, Clemson College, S.C. Banks charge exchange on local checks.

A deduction will be made for board and washing only when a student is absent one month or more.

The breakage fee is a deposit to cover damage or destruction of College property, and any amount remaining to the

*The price of uniform is subject to market fluctuations, and cadets often need a second pair of trousers.

credit of a student at the end of the session will be returned to him. Whenever College property is damaged the cost of repair is charged to the individual student, if the responsibility can be determined. Otherwise the cost is divided equally among all the students. Any student whose breakage account exceeds \$3.00 will be required to make another deposit.

A fee of \$1.50 is charged for diploma, payable before graduation.

The above charges do not include cost of books and stationery, which, however, may be obtained at the Cadet Exchange at wholesale prices.

Each student must provide himself with 4 sheets, 2 blankets, a comfort, 6 towels, 1 pillow, 2 pillow-cases, 1 mattress. Beds are single width. Mattresses will be kept by the College at wholesale prices.

Free Tuition

Section 1120, Revised Statutes of South Carolina, 1893, Volume I, setting forth the powers and duties of the Board of Trustees, contains the following provision:

“They shall charge each student a tuition fee of forty dollars per annum; indigent students shall not be required to pay said tuition fee.”

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

For Students receiving free tuition the quarterly charges will be \$10 less in each case than the amounts given above, namely:

September 8, 1909.....	\$ 60 68
November 10, 1909.....	19 13
January 26, 1910.....	19 13
March 30, 1910.....	19 13

The total charges for the year in such cases are only \$118.07.

Agricultural Scholarships

By an Act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and apportioned among the counties in the same manner as the members of the Senate and House of Representatives.

The law provides: "That the said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said college for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural and the textile courses: *Provided*, That not more than one scholarship from each county shall be open to the textile course."

Examination questions are to be prepared by the President and Faculty of the College and sent to the County Board of Education of each county on or before the 15th day of July in each year, with a statement of the number of vacant scholarships to which the county is entitled. The County Boards of Education shall hold the examinations by numbers, *i. e.*, by requiring each applicant to draw a number from a miscellaneous collection of numbers furnished by the County Board. Each applicant shall then seal his name in an envelope, which shall be kept sealed by County Boards of Education. The applicants shall then put their numbers and not their names on their papers. The papers shall be forwarded to the President of Clemson College and the mem-

bers of the Faculty of that institution, who may be designated by the President, shall examine the papers and return the marks of the applicant to the County Boards of Education by the numbers as furnished to them. The County Boards of Education shall then open the envelopes containing the names and make recommendations as to the award of the scholarships to the State Board of Education.

Section 4 reads: "That before applying for said scholarships applicants shall make proof, under oath, to their respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said board permission to stand such examination."

The law further provides that these scholarships "shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses."

NOTE.—Scholarship students will therefore have to deposit \$18.07 with the treasurer at the beginning of the session. This amount is approximate, depending on the price of the uniform.

Textile Scholarships for Two-Year Course

Victor Manufacturing Company Scholarship—Established by Lewis W. Parker.

Williamantic Scholarship.—"In memory of W. E. Borrows, a friend of mill operatives." Open to any resident of the State in need of assistance, and who is recommended by his employer.

Metz Scholarship.—By H. A. Metz, of H. A. Metz & Co., New York.

Draper Scholarship.—By Draper Co., Hopedale, Mass.
These scholarships are valued at \$50.

County Apportionment

The one hundred and sixty-five scholarships provided for in this institution by the Legislature are apportioned to the counties of the State according to law, as follows:

Abbeville	4	Greenwood	4
Aiken	5	Hampton	3
Anderson	6	Horry	3
Bamberg	3	Kershaw	3
Barnwell	4	Lancaster	3
Beaufort	4	Laurens	4
Berkeley	4	Lee	3
Calhoun	2	Lexington	4
Charleston	9	Marlboro	4
Cherokee	3	Marion	4
Chester	4	Newberry	4
Chesterfield	3	Oconee	3
Clarendon	4	Orangeburg	5
Colleton	4	Pickens	3
Darlington	4	Richland	5
Dorchester	2	Saluda	3
Edgefield	3	Sumter	4
Fairfield	4	Spartanburg	7
Florence	4	Union	3
Georgetown	3	Williamsburg	4
Greenville	6	York	5

GROUND, BUILDINGS AND EQUIPMENT

GROUNDS AND BUILDINGS

Campus and Farm.—The College grounds occupy about 1,122 acres of land, including the campus, sites of buildings and residences, grounds for military drill and outdoor athletics, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 140 feet, trimmed with gray sandstone. It contains 22 rooms, including recitation rooms, library and reading room, literary society and Y. M. C. A. hall, physical laboratory, besides the offices of the President, the Commandant, the Treasurer, and a reception room. Adjoining this building is Memorial Hall, the College Chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building there is a tower clock. The building is provided with steam heat and electric lights.

The Cadet Barracks comprise three large brick buildings. One is three stories high and contains 147 rooms for students, a dining hall 134 by 44 feet, and a kitchen 50 by 37 feet. The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure spring water. The rooms in the barracks are furnished with single-width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

Gymnasium.—A large room in the basement of the Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. During the past year this room was equipped with well-selected gymnasium apparatus. Among the apparatus are to be found a horizontal bar, parallel bar, springboard, travelling rings, flying rings, climbing rope, horse, low parallels, floor mats, and take-off board.

The object of the gymnasium is to give to those students interested in athletics training all the year around, so that they will constantly be in good condition for work on the athletic teams. It is also designed for those students who do not take other forms of exercise and depend upon the gymnasium for their only means of physical development. The work is not required, but is engaged in by a large number of students. A member of the Faculty superintends the work and directs the exercises.

Museum.—On the first floor of the Agricultural Hall, the Museum of Natural History is located. During the past year the museum has been furnished with large cases and the collections of the geologist, entomologist and botanist have been installed.

New Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70 K. W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a three-wire 75 K. W. direct current generator.

A 75 K. W. rotary converter is used to convert from one kind of service to the other.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through three 25 K. W. transformers. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The plant complete cost about \$25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric light and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

The Hospital, located about a quarter of a mile from the Barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the Surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

The Laundry is a brick building specially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for the students.

Agricultural Buildings

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connec-

tions, and steam heat; and provides classrooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology, veterinary science, dairying and animal husbandry, geology and mineralogy, and offices for the Experiment Station. It also contains a room 40 by 60 feet, with a gallery for a natural history museum, and a gymnasium hall of the same dimensions below.

The Horticultural Grounds embrace an area of thirty acres. Eight acres are devoted to apples for experiment purposes, six acres to peaches, two acres to grapes, two acres to pecans, one acre to plums, seven acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs and flowers.

The Greenhouse is 21 by 140 feet and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains three thousand large pot plants of various kinds and nine thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet. It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a dissecting room and a small room for hot-water plant, coal and general storage. On the first floor are rooms for office, instruments and medicines, toilet, horse-shoeing, harness closet, and an examining floor, operating table, soaking vat, three box-stalls and three tie-stalls. On the second floor are rooms

for attendant, pharmacy, storage of grain, kennels and cages for small animals, and a haymow.

Convenient to this building is a shed 24 by 40 feet, enclosed on three sides, but well lighted, and it has a large hayloft. There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into three paddocks. In one of these is an open cattle-shed, 13 by 32 feet, and a chute, used in dehorning, inoculations, and other operations where a herd is to be handled.

The Dairy Building is a wooden structure constructed and equipped especially to illustrate the most approved methods of dairy practice.

The Experiment Station Dairy Barn is a building, 110 by 38 feet, located on one of the highest elevations of the College property. It is a thoroughly modern structure from the standpoint of both convenience and sanitary conditions. It has a concrete floor, is lighted by electricity, and contains water in all parts of the building for washing floors, mixing foods, etc. It is fitted with 38 Taylor steel stanchions, which are both strong and comfortable. At one end of the building are four 50-ton silos, and the second floor, which has a capacity of 50 tons of loose hay, is equipped with a hay-carrier that will elevate a load of hay at a time.

A smaller barn, 50 feet in the rear, provides hospital stalls for sick cows, and also stalls and pens for young calves.

A number of paddocks and pastures have been provided to facilitate the management and to furnish sufficient pasturage for the stock.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the

equipment for instruction in agriculture.

Mechanical and Electrical Buildings

The Mechanical Building is a substantial brick structure containing about 30,000 square feet of floor space. On the first floor are the mechanical laboratory, machine shop, forge shop, foundry. On the second floor are the offices and recitation rooms. The wood shop occupies the whole of a two-story wing, 45 by 100 feet. The third floor is devoted entirely to the division of drawing.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use, it also contains the electrical engineering lecture room.

Chemical Buildings

The Chemical Department occupies two buildings. One is a two-story brick structure, 50 by 80 feet, covered with slate, and finished inside with Southern pine. Overlapping this at one corner, and connected with it, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building constitutes a commodious structure adequate to all the needs of the department.

Textile Building

The Textile Building is a two-story brick structure, with basement, of modern cotton mill design and construction. The first floor is occupied by a recitation room, picker, carding and spinning rooms, and an office. On the second floor are the designing and weaving rooms, a laboratory for experimental dyeing, and two offices. In the basement is located the dyeing, bleaching and printing machinery

Residences and Hotel

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, and thirty smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building with two eight-room annexes, situated on a hill overlooking the campus, is operated as a club by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

Water, Light and Heat

The General Water Supply is collected from springs and surface streams, and is pumped from two stations into a standpipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage, etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and a number of residences are connected with an adequate sewer system, which empties into the Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most

of the residences on the campus are lighted by electricity furnished from the central power station. The seven principal College buildings are heated by steam.

EQUIPMENT AND PRACTICAL INSTRUCTION

Agricultural Department

AGRICULTURE

The classroom, laboratory and office of the agricultural divisions are located on the first floor of Agricultural Hall, Rooms 11, 12 and 13. The laboratory is supplied with the necessary equipment for familiarizing students with the more important economic plant seed.

The College farm has a large storage barn provided with silos, a cow barn furnished with various forms of stanchions, a mule barn provided with the most improved forms of stalls and feedracks, implement and wagon sheds for storage of tools, etc., compost building for making compost in large quantities, and two large cribs for storage of corn.

Among agricultural machinery and implements may be mentioned the following: Self-binder, corn-harvester, Deering ball-bearing mower, Osborne mower, self-dumping rake, check-row corn-planter, Buckeye cultivator, B. F. Avery cultivator, Tower cultivator, disc-cultivator, spring-toothed harrow, smoothing harrows, various forms of pulverizers, manure-spreading machines, fertilizer and grain drill, various forms of small fertilizer drills, Planet, Jr., drill, two Planet, Jr., plows, scientific mill, stone grist mill, Tornado ensilage cutter, small thresher, hand-gin, rock-crusher, road machine, three terrace levels, and a 10 K. W. electric motor. .

GEOLOGY AND MINERALOGY

The division of geology and mineralogy occupies three rooms on the second floor of the new agricultural building.

The systematic collections contain about 2,200 labeled specimens of rocks, minerals and fossils. These are exhibit-

ed in glass cases in the laboratory and museum, and are available to students and the public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying the more important species at sight, and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photo-micrographic camera, and all important accessories, are also provided.

The classroom is supplied with large physical wall maps of the world and of all the continents, a complete series of topographic contour maps, furnished by the United States Geological Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geological department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all the publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

SOIL PHYSICS.

The soil physics laboratory is located on the ground floor of the Agricultural Hall and is provided with apparatus necessary for the determination of water content, absorptive capacity, water holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

HORTICULTURE.

The classroom and office of the horticultural division are

located on the first floor of the Agricultural Hall. The horticultural laboratory is located on the ground floor of the Agricultural Hall, and is equipped for giving practical instruction in general horticultural work. The greenhouse, hotbeds and cold-frames are located in the horticultural grounds where the principal practical work is done. The gardens, orchards and vineyards are field laboratories for instruction in horticulture.

VETERINARY SCIENCE.

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The classroom, laboratory and office of the veterinary division are located in Agricultural Hall, the laboratory and office on the first floor, Rooms 15 and 16, and the classroom on the ground floor. The laboratory is supplied with microscopes, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work. The lecture-room has a concrete floor, elevated seats, and is so arranged that the largest domestic animal may at any time be used before the classes for demonstration purposes.

The veterinary hospital is a frame structure of modern design, 48 by 65 feet, containing rooms for office, drugs and dissecting, besides stalls, feed-bins, water supply and electric lights, and a revolving operating table.

ZOOLOGY AND ENTOMOLOGY.

The laboratory, recitation room and office of this division are on the first floor of the Agricultural Hall. The laboratory is equipped with simple and compound microscopes, microtomes, dissecting instruments, photographic outfit, stereopticon, lantern slides and charts. The entomological cabinet contains a large number of injurious and beneficial insects.

The students have access to a small but carefully selected entomological library.

DAIRYING AND ANIMAL HUSBANDRY.

The dairy building is provided with steam plant and water-works, and everything required for making butter and cheese. In this laboratory are located the leading makes of cream separators, churns, and milk-testers.

The new experiment barn is provided with modern apparatus and conveniences for the proper handling of cattle, and the following breeds of cattle have been recently purchased and placed at this barn for experimental purposes : Ayrshire, Devon, Jersey, Hereford, Polled Angus, Polled Durham; Shorthorn (bare-faced dairy strains); Guernsey, Holstein; also six each of registered Shropshire and Southdown sheep.

BOTANY AND BACTERIOLOGY.

These laboratories are located on the first floor of Agricultural Hall, Rooms 21, 22 and 23. They contain a good equipment for satisfactory work in botany and bacteriology, including 25 dissecting microscopes, 20 compound microscopes, student dissecting sets, student microtomes, Zimmerman microtome, embedding baths, balances, water still, incubator, Arnold and Koch sterilizers, autoclave, dry ovens, anærobic apparatus, cameras for ordinary and photomicrographic work.

The students have access to a small botanical library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, the herbarium of the Botanist, including about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of central New York. A set of the F. V. Coville plants, of New York State, has also been added recently. The South Carolina herbarium

contains over 1,200 mounted specimens, representing the South Carolina flora.

Mechanical and Electrical Department

ELECTRICAL ENGINEERING.

Electrical Instrument Laboratory.—This is a separate brick building, designed especially for delicate electro-magnetic work—no iron, steel or other magnetic substances having been used in its permanent construction. It contains, in addition to all necessary elementary apparatus, the following instruments: Kelvin-Deka ampere balance, Kelvin four-coil astatic galvanometer, four D'Arsonval dead-beat galvanometers, large ring tangent galvanometer, three Elliott Brothers' standard resistant sets, Elliott Brothers' standard tangent galvanometer, Queen's standard ballistic galvanometer, Nalder Brothers' sensitive galvanometer, Rowland-D'Arsonval ballistic galvanometers, Willyoung standard condenser, Becker's chemical balance, Cahart-Clark standard cell, thermometers, Wheatstone bridges, storage and primary cells, etc.

Dynamo Laboratory.—To meet the demands of larger attendance and increased equipment, a new building has been provided in which is installed the dynamo-electric machinery. This building also contains a classroom and a dark room for photometric work. It is a single story brick structure, 37 by 80 feet, with basement for supply room.

The main floor is divided into a classroom 25 by 35 feet, and a dynamo laboratory room 53 by 35 feet. The building is heated by steam and lighted by inclosed arc and incandescent lamps.

The lecture-room has elevated seats and is equipped with a complete line of illustration models, apparatus and electrical instruments. It contains an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory contains, in addition to rheos-

tats, speed-counters, switches, and other small apparatus, the following machines and instruments:

50 H. P. high-speed McEwen automatic engine.

Direct Current Generators.—15 K. W. Mather, 17 K. W. Lundell, 2 1-2 K. W. Crocker-Wheeler, two 2 K. W. Kester.

Direct Current Motors—15 and 10 H. P. Kester, three 1-6 H. P. Crocker-Wheeler.

Direct Current Instruments.—Weston laboratory standard voltmeter, set of Weston portables, Jewell ammeter and voltmeter, Weston switchboard ammeter and voltmeter, Thompson recording wattmeter, etc.

Arc Lighting Apparatus.—Brush and Thompson-Houston generators, General Electric Company constant current transformer, principal makes of open and inclosed arc lamps.

Alternating Current Apparatus.—15 K. W. General Electric Company 2 and 3 and 6 phase revolving field generator complete with marble switchboard and full set of indicating instruments.

Seven and one-half K. W. General Electric Company 1, 2, and 3 phase rotary converter; 7 K. W. 3 phase converter built by students.

General Electric Company 2 and 3 phase induction motors. Six 3,000 watt constant potential transformers. Assortment of smaller transformers, motors and models.

Alternating Current Instruments.—Two Weston and 1 General Electric wattmeters, Weston standard A. C. voltmeter, 6 Thompson inclined coil ammeters and voltmeters, Cardew and electrostatic voltmeters, Kelvin ampere balance, Siemens electro-dynamometer, Stanley hot-wire ammeter.

Miscellaneous.—Two Schaffer & Budenberg tachometers, leading types of lightning arresters, fuse testing apparatus, etc.

The dark room contains a complete outfit for high po-

tential, high frequency and X-ray work, and a Deshler-McAllister central station type photometer, with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50 H. P. engine or two 20 H. P. motors. Steam and electric power for these is furnished by the central power plant, described on page 62. Students have access to this plant, and are thus enabled to see the practical workings of a combined electric power, light, and heating plant, and to test its efficiency. The problem of power distribution and utilization can also be studied from a practical example.

MECHANICAL ENGINEERING.

This laboratory occupies a room 41 by 45 feet, and contains the following equipment:

For Steam Engineering.—15 H. P. horizontal, locomotive type boiler; 6 H. P. vertical boiler; Erie 6 H. P. plain slide-valve steam engine; 6 H. P. vertical steam engine built in the shops; Payne 15 H. P. high-speed automatic engine; Corliss cross-compound condensing steam engine, arranged so that either side may be run condensing or non-condensing and each side independent of the other; Wheeler surface condenser with combined air and circulating pumps; set of steam-gauge testing apparatus; Carpenter's separating steam calorimeter; 2 throttling steam calorimeters; 6 steam engine indicators of various makes; 4 standard injectors.

For Hydraulic Engineering.—Two hydraulic rams; Pelton water motor; power triplex pump; 3 duplex pumps of different makes; 3 weirs; recording altitude gauge; 6 pressure and altitude gauges.

For Compressed Air.—Clayton air compressor with jacketed cylinder; improved air motor.

For Fuel and Lubricants.—Carpenter's fuel calorimeter, with scales, balances, and oxygen generating devices; standard viscosimeter.

For Testing Building Materials.—100,000-pound Olsen automatic vertical testing machine driven by 5 H. P. Westinghouse electric motor, and fitted for tension, compression, and transverse testing; Fairbank's cement testing machine; 3,000-pound transverse testing machine. The laboratory also contains a 5 H. P. Otto gasoline engine, an Ericsson hot-air engine, a 6 H. P. transmission dynamometer, graduated to read horse-power direct and built by students, and an assortment of standard thermometers, weights and measures. The apparatus is so arranged that any of it may be used for separate or combined tests, or for any original investigations. Besides the equipment in this room, the electric light and power plant, the heating plant of the College and barracks, the isolated plants at the dairy, horticultural grounds, and pumping station are available for instructional purposes.

PHYSICS.

The physical lecture-room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and experimental work of a general course in physics.

DRAWING AND DESIGNING.

The drawing rooms occupy the entire third floor of the Mechanical Engineering building. The third and fourth floors of the tower are also used as a dark room and blueprint room, respectively. An additional room in the wood shop has been temporarily fitted up for the use of the freshman class. A good selection of drawings and models in these rooms are of great benefit to the student in his work. These rooms are equipped to accommodate from 20 to 36 students at a time, with cases, boards and T-squares for about 500. Members of all classes are required to furnish their own drawing instruments. All instruments used by students must be approved by the in-

structor in charge; an inferior grade of instruments will not be acceptable. Students are advised to buy their instruments at the Cadet Exchange, where samples can be seen and wholesale prices obtained.

FORGE AND FOUNDRY WORK.

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 by 94 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down-draft forges, 18 Eagle anvils, equipped with small tools, a 60-inch exhaust fan, a No. 7 pressure blower, a drill-press, an emery grinder, a bending cone, a Buffalo iron-shear, two swage-blocks, a vise and work-bench. The other system consists of 18 Sturtevan down-draft forges, 18 Eagle anvils, thoroughly equipped with small tools, a 60-inch exhaust fan, directly connected, and a No. 4 pressure blower, directly connected.

Foundry.—This building occupies a space 43 by 76 feet and is free from posts or other obstructions. It is equipped with a 26-inch Victor Collian cupola, a Millett's core oven, a two-ton post crane, 8 improved molder's benches, an 18-inch brass furnace, with its usual complement of crucibles, tongs, etc., full set of molder's tools for the accommodation of 20 students, besides the usual accessories to the foundry, such as ladles, flasks, etc.

MACHINE WORK.

The machine shop is located in the southwest wing of the Mechanical building, which wing is 45 by 100 feet, well lighted, heated and ventilated.

It contains 17 benches, with vises, 105 kits of tools, and the following machine tools: 1 18-inch by 12-foot engine lathe; 1 18-inch by 8-foot engine lathe; 3 14-inch by 6-foot engine lathes; 4 14-inch by 6-foot Lodge & Shipley lathes; 2 14-inch by 6-foot F. E. Reed compound rest engine

lathes; 2 14-inch by 6-foot Hendey compound rest engine lathes; 1 10-inch by 4-foot F. E. Reed pattern maker's lathe; 1 15-inch by 8-foot speed lathe; 1 Cincinnati Universal milling machine, No. 3, all power feeds; 1 Lodge & Davis' Universal milling machine; 1 18-inch drill press; 1 28-inch back-gearred drill press; 1 22-inch by 6-foot Powell planer; 1 Cincinnati cutter and tool-grinder; 1 15-inch Gould & Eberhardt crank-shaper; 1 dry-emery grinder; 1 12-inch power hacksaw; 1 36-inch grindstone; 1 22-inch Leland & Faulconer wet-emery tool-grinder; 1 American twist drill-grinder; 1 10-inch slotting machine, built by New Haven Manufacturing Company; 1 fan; 1 forge. The tool-room in connection with the shop contains all tools, etc., necessary for use with the machines.

The 7 H. P. Motor which drives the machinery was built by students.

WOODWORK.

The woodshop occupies the two-story wing on the east side of the Mechanical Engineering building, 45 by 100 feet. The lower floor contains the freshman classroom, equipped with 15 work-benches and sets of tools, 6 turning lathes, with tools for each, and other tools for handwork. On this floor is also the planing mill machinery, consisting of a double-roll planer, power rip and cut-off saws, band saw, scroll saw, 16-inch jointer, moulding machine, mortising machine, tenoning machine, emery-grinder, lathe with 12-foot bed, etc.

The upper floor is devoted principally to the work for the sophomore class, and is fitted up with 15 work-benches and 90 sets of tools—one set for each student; 6 10-inch turning lathes, large pattern lathe, combination saw and boring machine, double head-shaper, panelling machine, carving machine, jigsaw, universal trimming machine, special door and sash clamps, steam glue-pots, miter-cutters,

etc. The power is supplied by electric motors conveniently located in the various rooms. A large lumber yard and dry-kiln provide seasoned lumber at all times.

Chemical Department

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new and somewhat similar building, 53 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Two of these, connecting with each other, are employed as a laboratory for the agricultural seniors. Of the other rooms on this floor, one is a laboratory for post-graduate students and one a balance room, while the third is reserved for such use as the ever-increasing demands upon the department may require.

On the second floor of this building there are two large laboratories, one for the juniors in analytic chemistry; the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accommodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and con-

nected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to State analytical work and Agricultural analysis. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is used for agricultural analysis. Adjoining this is a balance room, in which provision is made also for optical and electrolytic apparatus. Of the remaining rooms, one is used for water analysis, the other as an office.

On the second floor of this building there are seven rooms: a lecture-room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library and professor's laboratory.

The lecture-room will seat 170 students, the seats being arranged in tiers.

The hoods in this building are all connected by earthenware pipes with a tightly built room just under the roof, over which there is a large ventilator.

The rooms in the basement are used for assaying ores, for the preparation of agricultural products for analysis, and for storage. In one of these rooms there is a gas machine for supplying gas especially to the new building, though this machine and the one in the old building are so arranged that either may be used to furnish gas to both buildings in case of necessity.

Department of Textile Industry

The building is a brick structure of modern cotton mill design, 168 by 75 feet. It is of the slow burning type, built

according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing office, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the student an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30 H. P., 220-volt, direct-current Westinghouse motor, driving the carding machinery, and a 20 H. P., 220-volt, direct-current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by the experimental dyeing laboratory, hand looms, power looms, a lecture-room and two offices. The power machinery on this floor is driven by a 20 H. P., 220-volt, direct-current General Electric Company motor.

The basement, which is situated under the right-hand half of the building, is occupied by the dye-house, and is nicely equipped for that purpose.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-heating system and automatic fire-sprinklers from The D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

CARDING DIVISION.

Pickers.—One Atherton automatic feeder; one Atherton breaker; one Atherton finisher lapper, with evener motion.

Cards.—One Saco and Pettee 40-inch revolving top flat

card; one Mason 40-inch revolving top flat card; two traverse wheel grinders; two drum traverse grinders; stripping and burnishing rolls; two complete sets of carder's tools.

Combing.—One Mason sliver lap machine; one Mason ribbon lap machine; one Mason six-head combing machine.

Railway Heads.—One Saco and Pettee railway head, with evener motion, stop motions, and metallic rolls; one Mason railway head, with evener motion, stop motion, and metallic rolls.

Drawing.—One Saco and Pettee drawing frame, four deliveries, stop motions, and metallic rolls; One Mason drawing frame, four deliveries, stop motions, and metallic rolls.

Fly Frames.—One Saco and Pettee 12-inch by 6-inch 40-spindle slubber, with latest differential motion; one Saco & Pettee 8-inch by 4-inch 60-spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 7-inch by 3½-inch 80-spindle fine roving frame, with latest differential motion; one Woonsocket 6-inch by 2½-inch 96-spindle jack roving frame, with Daly's improved differential motion.

SPINNING DIVISION.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mule Spinning.—One Mason self-acting spinning mule, 120 spindles, 1¼-inch gauge, with all latest improvements.

Spooling.—One Draper spooler, 40 spindles; one Saco & Pettee spooler, 72 spindles; one Barber & Coleman knitter.

Twisting.—One Draper combination wet and dry twist-

er, 48 spindles; two Fales and Jenks wet twist-ers, combination filling and taper top wind, 70 spindles each.

Winding.—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Company bobbin winder; one Geo. W. Payne & Company skein winder; one Universal cone and tube winder.

Reeling.—One D. A. Tompkins Company adjustable reel, 50 spindles.

Warping.—One Draper section warper; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

The divisions of carding and spinning are equipped with all necessary supplies, such as doff-boxes, roving-cans, bobbins, spools, cops, cones, tubes, and change gears for all machines.

WEAVING DIVISION.

Hand Looms.—Seventeen hand looms, with 4 by 4 box motion, and 30 harness shedding engines, arranged for four beam work.

Power Looms.—One 40-inch Northrop cam loom, with warp stop motion and automatic filling magazine; one 28-inch Northrop cam loom, with warp stop motion and automatic filling magazine, also fitted with Stafford 20-harness dobby; one Mason 36-inch gingham loom, with 4 by 1 box motion; one Mason 40-inch loom, with Stafford 20-harness dobby, also arranged for center selvage motion; one Mason 44-inch fancy cotton loom, with 24-harness dobby; one Stafford 30-inch fancy cotton loom, with 20-harness dobby and leno attachment; one Stafford 30-inch dress-goods loom, with Stafford 400-hook, single-lift, swing-cylinder Jacquard; one Knowles 40-inch "Gem" loom, with 30-harness dobby, 4 by 4 box motion; one Crompton & Knowles 36-inch fancy cotton towel loom; one Crompton 65-inch loom, 4 by 1 drop box motion, fitted with 624-hook, double-lift, swing-cylinder Jacquard, tied for weaving table damask; one Whitin 40-

inch cam loom, arranged to weave up to six harness; one Whitin 40-inch fancy cotton loom, fitted with 20-harness dobby; one Whitin heavy pattern duck loom; one Knowles 30-inch fancy cotton loom, 2 by 2 box motion, 16-harness dobby; one Kilburn & Lincoln 40-inch loom, arranged for dobby.

Dressing.—One Davis & Furber Dresser, complete.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

This division is also equipped with one floor stand, fitted with eight-harness dobby and leno attachment, built especially for illustrating leno weaves; one Jacquard tying-up frame; warping pegs, beaming frames; drawing-in frames; extra heddles and heddle frames; reeds; change gears, etc.

DIVISION OF TEXTILE CHEMISTRY AND DYEING.

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dye-house. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accommodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

Dye-House.—Nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one steaming and aging box; one mercerizing apparatus for yarn; one calico printing machine; one 20-gallon copper kettle; one set copper measures; one dry closet. There is also an equipment of reels, yarn-testers, analytical balances, etc., and necessary instruments for experimental purposes.

DEPARTMENT LIBRARY

For the use of students and instructors, a reading room in the textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department and an equipment of old hand machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

Civil Engineering

The collection of field instruments contains the following: Engineer's transits, with stadia and solar attachment; 3 20-inch wye levels, 4 railroad compasses, 2 6-inch vernier compasses; plane table with 9-inch telescope, vertical circle and stadia; drainage level, precision level current meter with electric recorders, sextant, aneroid barometer, 4 12-foot self-reading leveling and stadia rods, 12-foot New York leveling rods, 12-foot Boston leveling rod, cross-section rod with clinometer, 6 surveyor's chains, 2 engineer's chains, 6 standard 100-foot steel tapes, 2 66-foot steel tapes, 50-foot steel tape, and a full supply of ranging poles, flag poles and other accessories.

The office equipment includes planimeter, slide rules, and drafting instruments and appliances. In addition to the drawing done under the immediate direction of the instructor in civil engineering, the regular work in drawing and designing provided for students pursuing this course is arranged with special view to their needs. The engineering laboratory and the shops and drawing room, in which the civil engineering students receive an important part of their

instruction, are described under the equipment of the mechanical and electrical department.

Library*

In the main building is a series of rooms specially constructed for the use of the Library. There are now upon the shelves 9,310 volumes, classified under the various heads of literature, history, biography, science, and reference books. In addition to these in the general library, there are 1,493 volumes in Experiment Station and department libraries of the College. There are also about 5,000 government publications and 200 reference books, together with about 6,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to 35 of the leading monthly periodicals, 14 weekly, the principal daily papers of the State and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

*See donations to library, page 145.

DEPARTMENTS OF THE COLLEGE
DETAILED DESCRIPTIONS OF COURSES

DEPARTMENTS OF THE COLLEGE

For administrative purposes, the College is divided into seven departments, each presided over by a director, who has general supervision of all the work and interests of his department. The departments comprise the various divisions indicated below, which are in the immediate charge of the professors, associate and assistant professors, and instructors of the respective departments.

Numbers in parentheses refer to description, beginning on page 91.

1. Agricultural Department

Agriculture (100-108).

Geology and Mineralogy (110-117).

Horticulture (120-122).

Veterinary Science (130-137).

Zoology and Entomology (140-142).

Dairying and Animal Husbandry (150-162).

Botany and Bacteriology (170-176).

2. Engineering Department

Electrical Engineering (200-203).

Mechanical Engineering (210-215).

Civil Engineering (220-228).

Physics (230-232).

Drawing and Designing (240-249a).

Forge and Foundry Work (250-252).

Machine Work (260-261).

Woodwork (270-272).

3. Chemical Department

Chemistry (300-306).

Metallurgy (310-311).

4. Textile Department

Carding and Spinning (400-409).

Weaving and Designing (410-414).

Textile Chemistry and Dyeing (420-421).

5. Academic Department

English (500-504)

History and Political Economy (510-515).

Mathematics (520-527).

German (540-541).

6. Military Department

Military Science and Tactics (600-602).

7. Preparatory Department

DETAILED DESCRIPTIONS OF COURSES.

AGRICULTURAL DEPARTMENT.

Professor Barrow, Director.

Agriculture

Professor Barrow.

100.

FRESHMAN CLASS; FIRST TERM.

COURSES I, II, III.

A broad review of the general principles underlying Agricultural practice.

101.

SOPHOMORE CLASS; FIRST TERM.

COURSES I, II, III.

The improvement of plants by selection, scoring and judging of farm crops. Terracing, land measurement and drainage.

102.

JUNIOR CLASS; SECOND AND THIRD TERMS.

COURSE I, II, III.

Improvement and handling of soils. Farm manures and compost heap. Green manures and the rotation of crops. Conditions influencing germinations. The practical work consists of soil preparation, crop planting, etc.

103. *Farm Mechanics.*

JUNIOR CLASS; THIRD TERM.

COURSES I, II, III.

A detailed study of the farm implements, the history of their development, material of which manufactured, work accomplished. The object of this course is to familiarize the boys with the latest improvement in farm machinery and especially to impress upon them the saving of labor effected by their use. This will be given both in field and laboratory.

104.

SENIOR CLASS; FIRST TERM.

COURSES I, II, II.

Commercial fertilizers—their use and manufacture.

A detailed study of plant breeding with special reference to corn

and cotton. Forage and Fibre crops, their growth, cultivation, handling, and composition.

SECOND TERM.

COURSES I, III.

Farm plans and buildings—Farm management—Adaptation of plant to soils.

THIRD TERM.

COURSE I, II, III.

Systems of farming, farm economics. A detailed study of special phases of Southern farming. Practical work will consist of field studies embracing preparation and planting, cultivation and harvesting of crops.

105. *Soil Physics.*

COURSE I, II.

A laboratory and field course in soil physics, conditions influencing the physical condition of soils, their texture and behavior under certain management.

Geology and Mineralogy

Professor Calhoun.

110. *Elementary Mineralogy*

JUNIOR CLASS; COURSE VI.

Laboratory study of crystal forms by the use of models and natural crystals; chemical and physical properties of minerals; practice in the determination of unknown specimens. This is a brief course, intended to give the student an adequate conception of the science of mineralogy together with some practical acquaintance with the more common and important minerals.

111. *Mineralogy*

JUNIOR CLASS; COURSES II, IV.

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to readily identify all but the rarer minerals.

112. *Elementary Geology*

SENIOR CLASS; COURSES I, II, III, V, VI.

The elements of dynamical, structural and historical geology. The influences of geologic phenomena on man are emphasized, particularly in the study of rock-decomposition and the formation of soils, the processes of erosion and deposition, and the resultant topographic forms.

113. *General Geology*

JUNIOR CLASS; COURSE IV.

A broad course in the elements of general geology. Special stress is laid on structural and dynamical geology in their relations to the formation of rocks and rock-structures, the metamorphism of rocks, and the deposition of minerals and ores. In historical geology special attention is given to the development of the North American continent.

114. *Petrography*

SENIOR CLASS; COURSE IV.

A study of the structure, composition, origin, and classification of various families of rocks, their distribution, modes of occurrence, and geological importance; microscopic characters of rock-forming minerals, and the use of the petrographic microscope. The course is supplemented by work in the field and laboratory, and the student becomes familiar with rocks and with practical methods of investigation, and their applications to the problems of lithological geology.

115. *Economic Geology*

SENIOR CLASS; COURSE IV.

A general survey of geological products of value, including metallic and non-metallic minerals, and building stones; their origin and nature, distribution, modes of occurrence, and methods of exploitation. The course deals particularly with the economic deposits of North America, with briefer reference to those of other countries for purposes of comparison and for the elucidation of problems of origin, exploitation, etc. The student is required to read and prepare abstracts of the more important monographs and reports.

116. *Practical Geology*

SENIOR CLASS; COURSE IV.

Field study and reports of geological processes and phenomena, rocks and rock-structures, both original and secondary, accompanied by laboratory exercises by means of specimens, models, photographs, maps and sections; interpretation and representation of geologic phenomena, and training in the principles and methods of geological surveying, the construction of geological maps and sections, and the preparation of reports.

For description of equipment, see page (?).

Horticulture.

Instruction is given in the Junior and Senior Classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the college, these practical exercises enable the student to become familiar with all details of the work.

120. *Propagation and management of Nursery Stock.*

JUNIOR CLASS; COURSES I, II, III.

Lectures are given on the following subjects and special attention is paid to the practical work along these lines. Stratification of seeds, sowing seeds, seed testing, separation and division, budding and grafting, grading and storing nursery stock, nursery management.

Text-book: The Nursery Book, by L. H. Bailey.

121. *Vegetable Gardening.*

JUNIOR CLASS; COURSES I, II, III.

Construction of hot-beds and cold-frames, their use and management: preparation of the soil; fertilizing; seed sowing; transplanting and cultivation; gathering; storing and marketing; spraying and spraying equipment.

Text-book; Principles of Vegetable Gardening, by L. H. Bailey.

122. *Ornamental Horticulture and Floriculture.*

SENIOR CLASS; COURSES I, II.

The work includes ornamental horticulture and floriculture, the propagation and care of ornamental plants; general greenhouse work and management.

For description of buildings, grounds, and equipments, see page 70.

Veterinary Science.

Associate Professor Powers.

Assistant Feeley.

130. *Veterinary Anatomy.*

JUNIOR CLASS; COURSE I.

An elementary course including study of the skeleton, principle articulations, muscles of locomotion, etc.

131. *Veterinary Anatomy and Physiology.*

JUNIOR CLASS; COURSE I.

Anatomy and physiology of the circulatory, respiratory, digestive, urinary and generative organs; the lymphatic circulation and nervous system.

132. *Histology.*

JUNIOR CLASS; COURSE III.

Microscopical study of the different organs.

133. *Physiological Demonstrations.*

A laboratory course in physiology.

134. *Sporadic Animal Diseases.*

SENIOR CLASS; COURSE III,

A brief course in the non-contagious diseases of farm animals, special attention being given to cause and prevention.

135. *Contagious Animal Diseases.*

SENIOR CLASS; COURSE III.

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission symptoms, cause, prevention, and treatment of the diseases common to man and animals are studied. Especial attention is given to the contagious diseases most common in this State.

136. *Veterinary Clinics.*

SENIOR CLASS; COURSE III.

A free clinic is held at the veterinary hospital every Monday afternoon of the session, except on holidays and during examinations. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in the surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

Zoology, Entomology and Bacteriology

Assistant Professor Ainslie

Instruction work in this division is carried on by means of lectures and recitations supplemented by laboratory work and outside investigation and experimentation. So far as practicable special stress is laid on the economic aspect of subjects treated.

140. *General Zoology.*

SOPHOMORE CLASS; COURSES I, II, III.

This course covers two terms the first of which is spent in laboratory work covering the lower forms of animal life and laying a foundation for the second. The second term's work consists of both laboratory and class room exercises. The text book is used in connection with lectures to gather the facts observed in the laboratory work into a general view of the development of the animal kingdom. So far as possible animals of economic importance are used as types.

141. *Economic Entomology.*

SOPHOMORE CLASS; COURSES I, II, III.

The third term of the year, following Zoology, is taken up with a more detailed study of the insects than is possible in that course. The insects of economic importance in the south are studied individually as well as the preparation and use of insecticides and other preventative and remedial measures. Upon completion of this course the student is able to determine for himself the best means of combating the insects which trouble the farmer and fruit grower.

142. *Introductory Bacteriology.*

SENIOR CLASS; COURSES I, II, III.

A brief study of the general character, habits and work of bacteria is followed by practical work in growing, mounting and determining them. Soil and Dairy bacterial are given especial attention. The principle bacterial contagious diseases and methods of prevention are considered briefly in the class work.

143. *Animal Bacteriology.*

SENIOR CLASS; COURSE II.

This course treats of dairy bacteriology more in detail, and in addition some time is spent in the study of disease producing forms. The principal contagious bacterial diseases of animals are studied. This course is open only to those who have completed the introductory course in Bacteriology.

144. *Entomology.*

TWO YEAR COURSE.

This covers but one term and will be entirely concerned with the economic aspects of the subject. After a brief general survey of the group of insects, a short study of the different types of mouth parts will be undertaken in the laboratory while at the same time the injurious insects of most frequent occurrence in this section, together with the most effective means of combatting them, will be discussed in the lectures. Towards the close of the session practical work with spraying will be carried on in the field in co-operation with the Division of Horticulture.

Animal Husbandry and Dairying.*Associate Professor Nourse.**Assistant Professor Burgess.*150. *Types of Cattle, Horses, and Mules.*

JUNIOR CLASS; COURSES I, II, III.

Market and breed types of dairy and beef cattle; their origin and history. Types and breeds of horses and mules.

152. *Types of Sheep and Hogs.*

JUNIOR CLASS; COURSES I, II, III.

Breed and market types of sheep and hogs; their origin and history.

153. *Principles of Breeding.*

SENIOR CLASS; COURSES I, III.

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding. in-an-in breeding; line breeding, etc.

154. *Stock Judging and Pedigree work.*

JUNIOR CLASS; COURSES I, II, III.

Judging dairy and beef cattle, sheep, hogs, horses, and mules, and score-card practice.

155. *Care and Management of Dairy Cattle.*

JUNIOR CLASS; COURSE III.

Care and management, housing and feeding dairy cattle.

156. *Stock Feeding (short course).*

SENIOR CLASS; COURSE I.

Stock feeding, including the consideration of the comparative food value and cost of all Southern feed stuffs; economic methods of feeding to produce milk, beef, etc.; and method of feeding work animals.

157, 158. *Stock Feeding.*

SENIOR CLASS; COURSES I, II, III.

Stock feeding, including composition and digestibility of feeding stuffs: their preparation, use and cost; nutritive ratio; digestion, etc. The available food stuffs of the South are discussed at length.

160. *Compounding Rations.*

SENIOR CLASS; COURSES I, II, III.

161. *Milk and its Products.*

JUNIOR CLASS; COURSES I, II.

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pasteurization; milk testing; dairy machinery; manufacture of butter, cheese and ice cream, and marketing.

162. *Practical Work in Creamery.*

JUNIOR CLASS; COURSES I, II.

Cream separation and ripening; pasteurization of milk and cream;

bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

Botany and Forestry

Associate Professor Shattuck

171. *General Botany*

FRESHMAN CLASS; COURSES I, II, III.

A preliminary course in general botany. A morphological study of types of Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms. The work is largely microscopical, though the students have access to a very full line of preserved botanical material when the course demands its use.

Text-book: Burgen and Davis' "Principles of Botany."

172. *Biological Preparations*

SOPHOMORE CLASS; COURSES I, II, III.

A course giving the latest and most approved methods of preserving all kinds of plant and animal material. This work includes the preparation of museum, and herbarium specimens, and the methods of killing, fixing, embedding, staining and mounting all kinds of biological material for microscopic study. Special attention is given to the technique of plant diseases.

Text-book: Chamberlain's Methods.

173. *Plant Physiology*.

JUNIOR CLASS; COURSES I, II, III.

A laboratory course designed to illustrate the functions of various parts of plants and their relation to light, heat, moisture, soils, etc., with the chemical and physical processes involved in their development and death.

Text-book: Ganong's Plant Physiology.

174. *Systematic Botany*.

SOPHOMORE CLASS; COURSES I, II, III.

A course in the taxonomic and ecological features of this region with a laboratory and field study of the main types of Angiosperms. From 50 to 100 plants are here identified and classified.

Text-book: Gray's New Manual of Botany.

175. *Elements of Forestry*.

JUNIOR CLASS; COURSE I, II.

A lecture, field, and laboratory course dealing with the general principles of forestry, together with the practical methods applied in lumbering, forest propagation and conservation.

Text-book: Green's Principles of American Forestry.

176. *Plant Pathology.*

SENIOR CLASS; COURSES I, III.

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed.

Text book:

177.

SECOND YEAR SHORT COURSE IN AGRICULTURE.

The first term is devoted to the study and identification of the common plants of the country.

178.

The second term of this year is devoted to a study of the principles of Forestry.

ENGINEERING DEPARTMENT.

Professor Riggs, Director.

Electrical Engineering.

Professor Riggs.

Assistant Professor Dargan.

200. *Electricity and Magnetism.*

JUNIOR CLASS; COURSE V.

Study of the principles of electricity and magnetism, and the elementary design of electro-magnetic mechanism. Wiring calculations, incandescent lighting, etc.

Text-books: Elementary Lessons in Electricity and Magnetism, by Thompson; Elementary Electricity and Magnetism, by Jackson.

201. *Electrical Laboratory Practice.*

JUNIOR CLASS; COURSE V.

Experimental verification of fundamental electrical laws; measurement of currents, electromotive force, resistance, permeability, capacity, etc.

Text-book: Electrical Laboratory Experiments, Riggs, Kyser and Dargan.

Reference Books: Ayrton's Practical Electricity; Nichol's Physics Vol. I; Stewart and Gee's Practical Physics; Henderson's Practical Electricity and Magnetism, Vols. I and II.

202. *Dynamo Electric Machinery.*

SENIOR CLASS; COURSE V.

First half session: Study and design of direct current dynamo-electric machinery. Second half session: Study of alternating currents and their application to light and power. Special attention is directed to polyphase systems and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineering; Franklin's Alternating Currents and Alternating Current Machinery; Dynamo Design, by Riggs.

Note.— A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Engineering, and Course 238 in Mechanical Drawing.

203 *Electrical Laboratory.*

SENIOR CLASS; COURSE V.

Care, management and testing of arc and incandescent generators, direct current motors, etc. During third term, management and test of single and Polyphase machinery and apparatus.

Text-book: *Electrical Engineering Experiments*, by Riggs.

For description of buildings and equipment, see page 73.

Mechanical Engineering.

Associate Professor Earle. S. B.

Assistant Professor Howard.

In this course the student is taught the application of his scientific, mathematical and technical knowledge to the design and construction of engineering structures, and of machinery and manufacturing plants in general.

210. *Mechanism.*

JUNIOR CLASS; COURSES IV, V, VI, VII.

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicyclic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-books: *Stahl and Wood's Mechanism*.

211. *Mechanics.*

JUNIOR CLASS; COURSES IV, V, VI, VIII.

Motion, force, velocity, force system, moments of force, general principles, and methods of solving problems both analytically and graphically.

Text-book: *Maurer's Technical Mechanics*.

212. *Mechanics.*

SENIOR CLASS; COURSES V, VI.

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: *Maurer's Technical Mechanics*.

213. *Mechanical Engineering.*

SENIOR CLASS; COURSES IV, V, VI, VII.

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory and design of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; heating and ventilating systems; transmission of power; engineering specifications and the law of contracts. Theory of the strength of

engineering materials. Graphical solution of problems. Hydraulics.
Text-book: *The Steam Engine and Other Heat Motors*, by Creighton.

214. *Mechanical Laboratory.*

SENIOR CLASS; COURSES V, VI.

Study, use and calibration of water-meters, wiers, steam gauges, indicators, dynamometers, calorimeters; efficiency tests of screw-jacks and hoists; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; erecting, lining up and setting the valves of the plain slide-valve and automatic cut-off steam engines; indicator practice; horse-power and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference Books: *Carpenter's Experimental Engineering*; *Smart's Engineering Laboratory Practice*; *Thurston's Steam Engine*.

215. *Mechanical Laboratory.*

SENIOR CLASS; COURSES IV, VII.

Study, use and calibration of steam gauges; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; erecting, lining up and setting the valves of plain slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps, firing and testing of steam boilers.

Reference Books: *Carpenter's Experimental Engineering*; *Smart's Engineering Laboratory Practice*; *Thurston's Steam Engine*.

For description of equipment, see page 75.

Civil Engineering.

Professor Houston.

530. *Descriptive Geometry.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; shades, shadows and perspective; numerous original exercises.

Text-book: *Low's Practical Solid or Descriptive Geometry*.

531. *Plain Surveying.*

SOPHOMORE CLASS; ALL COURSES.

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the areas are computed and plats are drawn. Experience is given in problems

of laying out and dividing up land, and in locating irregular boundaries. Practice is also had in section and differential leveling.

Text-book: Raymond's Plane Surveying.

532. *Higher Surveying.*

JUNIOR CLASS; COURSE VI.

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; geodetic surveying; map and plan drawing; topographical symbols, etc.

Text-book: Johnson's Surveying.

533. *Highway Engineering.*

JUNIOR CLASS; COURSE VI.

Location, construction and maintenance of country roads and city streets; advantages of various materials for road covering; effects of grades and surface upon the cost of transportation; plans and specifications; practical problems in change of grade and relocation from surveys of existing roads.

Text-book: Spalding's Roads, Streets and Pavements.

534. *Railway Engineering.*

JUNIOR CLASS; COURSE VI.

Preliminary and location surveys; location from contour maps; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches, turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

Text-book: Webb's Railway Construction.

535. *Rural Engineering.*

JUNIOR CLASS; COURSES I, II.

This course is arranged with special view to the needs of the agricultural students. Among the subjects taught are: Farm surveying; laying out and dividing up land; land drainage, including surface-drainage, under-drainage, and hillside ditching and terracing. Road engineering, a practical course in road-making and maintenance, with special reference to conditions in South Carolina. The principles underlying grade and surface resistance, drainage, surfacing, and the best methods of construction are carefully studied. The instruction in the classroom is supplemented by a liberal amount of field practice.

Text-book: Gillespie's Manual of Road-Making; Elliott's Farm Drainage.

536. *Railway Engineering.*

SENIOR CLASS; COURSE VI.

Surveys are made for a line of railway a mile or more in length;

the necessary plans, profiles and cross-sections are prepared; grades are determined, curves laid out, slope stakes set, and all the needed measurements made to enable the student to complete the excavations and embankments, and to estimate the cost of construction.

Text-book: Webb's Railway Construction.

537. *Structural Engineering.*

SENIOR CLASS; COURSE VI.

Building materials; mechanics of construction; derivation of practical formulas; masonry; foundations on land and in water; stability of walls and arches; analytical and graphical investigation of stresses in plate girders, Howe, Pratt, Warren and other types of highway and railroad bridges, and various forms of roof trusses; bridge design.

Text-books: Fiebeger's Civil Engineering; Merriman and Jacoby's Roofs and Bridges, Parts I and III.

538. *Hydraulic Engineering.*

SENIOR CLASS; COURSE VI.

Hydrostatics; efflux; resistance and work of liquids; motion of water in pipes and open channels; derivation of practical formulas; hydrostatic and hydraulic machinery; determination of discharge of stream; head and available power; form and dimensions of pond or reservoir; detailed topography of dam site; determination of form and dimensions for stability of dams; preparation of plans and specifications; lectures on water-supply engineering.

Text and Reference Books: Merriman's Hydraulics; Frizel's Water-Power; Wegmann's Construction of Dams; Folwell's Water Supply Engineering.

For description of equipment, see page 85

Note.—The following changes have been made in the curriculum as given on page 41:

In the Junior class, Physical Laboratory from 2 2 - to 3 3 -, and Civil Engineering field work from 4 4 3 to 3 3 3.

In the Senior class change Civil Engineering field work from 6 6 6 to 3 3 6, and put in Machine Shop 3 3 -. Two hours practical Electrical Engineering may be given in place of second term Mechanics.

Physics

Associate Professor Poats

The study of physics is begun in the Sophomore year by all regular students, and completed in that year by those students taking courses in agriculture and textile industry. All other regular students take physics, both theoretical and practical, in the Junior year.

The instruction is by lectures and recitations, special stress being

laid upon principles and facts which are fundamental to the several engineering professions. The lectures and recitations are illustrated by numerous experiments before the class.

In the physical laboratory the student is taught to perform for himself all the experiments of a general laboratory course. The properties of matter, the laws of mechanics, heat, electricity, magnetism, light and sound are verified. Students are required to make accurate and neatly written reports of all experiments.

230. *Elementary Physics.*

SOPHOMORE CLASS; ALL COURSES.

Properties of matter; physical measurements; mechanics of solids and fluids; electricity and magnetism.

Text-book: Cahart and Chute's Physics.

231. *Electricity and Magnetism, Heat, Sound and Light*

JUNIOR CLASS; COURSES IV, V, VI.

Text-books: Cahart and Chute's Physics; Cahart's University Physics.

232. *Physical Laboratory.*

JUNIOR CLASS; COURSES IV, V, VI.

Experimental determination of the physical properties of matter and the verification of laws and mechanics; heat; sound; light; electricity and magnetism.

For description of equipment, see page 76.

Drawing and Designing

Associate Professor Lee.
Assistant Professor Klugh.
Instructor Bogard.
Instructor Burruss.

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

240. *Freehand Drawing*

FRESHMAN CLASS; ALL COURSES.

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

242. *Mechanical Drawing.*

FRESHMAN CLASS; COURSES IV, V, VI, VII.

Exercises in the use of drawing instruments; lettering geometri-

cal problems; projections; conventional section and shade lines; working drawings of simple parts of machines, from sketches and models.

243. *Mechanical Drawing.*

FRESHMAN CLASS; COURSES I, II, III.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings.

244. *Mechanical Drawing.*

SOPHOMORE CLASS; COURSES IV, V, VII.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts.

244a. *Mechanical Drawing.*

SOPHOMORE CLASS; COURSE VI.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications; lettering; topographical drawing.

245. *Mechanical Drawing.*

JUNIOR CLASS; COURSE V.

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tinting, tracing and blue printing.

246. *Mechanical Drawing.*

JUNIOR CLASS; COURSE VI.

First half the same as Course 235; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

247. *Mechanical Drawing.*

JUNIOR CLASS; COURSE IV.

First half same as Course 235. Second half, drawing of furnace designs and other metallurgical appliances.

248. *Machine Design.*

SENIOR CLASS; COURSE V.

Necessary drawings for work under construction in the shops;

details of steam engine and electrical machinery. Design drawing required in graduation thesis.

249. *Mechanical Drawing.*

SENIOR CLASS; COURSE VI.

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

249a. *Mechanical Drawing.*

SENIOR CLASS; COURSE VII.

Cam Drawing; Jacquard tie-ups, etc. This work is done in the Textile School.

For description of equipment, see page 78.

Forge and Foundry.

Assistant Professor Gantt.

Assistant Lewis.

250. *Forge Work.*

FRESHMAN CLASS; ALL COURSES.

Study of Buffalo down-draft forges; graduated exercises, embracing fundamental operations of forging, such as upsetting, bending, punching, twisting, welding, etc. Part of third term is devoted to working with tool steel, involving processes of annealing, hardening, tempering, etc.

251. *Foundry Work.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

Names and uses of molders' tools; tempering and working of molding-sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

252. *Forge Work.*

FRESHMAN CLASS; COURSES I, II, III.

Study of Buffalo down-draft forges. Short course, embracing fundamental operation of forging.

For description of equipment, see page 77.

Machine Shop.

Assistant Professor Howard.

260. *Machine Shop.*

JUNIOR CLASS; COURSES V, VI, VII.

Instruction begins at the bench with exercises in chipping, filing, scraping and polishing. Castings and drawings are given the student, and he is required to chip, file, scrape and polish each casting into the exact form and size represented by the corresponding drawing. From bench work the student is advanced to machine work, where he is taught turning, boring, polishing, drilling, threading, planing, milling, grinding, etc., in iron, brass and steel. In all cases the exercises are required to be worked to drawings. The graded course of exercises is designed to teach the fundamental principles and practices of machine metal-work from the simplest to the most difficult operations.

Only a few set exercises are given to teach important fundamental processes. It is the policy of the shop to keep several large machines in process of construction, requiring the students to do the work. Experience has taught that students take greater interest in making parts of a machine that it is for actual use than in mere routine exercise work.

261. *Machine Shop.*

SENIOR CLASS; COURSE V.

The Senior year is devoted to a more advanced work in the construction of engines, dynamos, motors and other machines. The student is encouraged to work from his own designs as far as possible, but is guided and directed by the instructor in charge.

For description of equipment, see page 76.

Woodwork.

Assistant Prof. Hook.

Assistant Gardner.

The course in woodwork does not aim to make the student a skilled workman, but rather to teach the proper use of tools and impress the importance of working to exact dimensions. At the same time, it gives a certain amount of manual dexterity, useful in every vocation.

The course covers two years, beginning with the most elementary principles and advancing gradually by a series of graded exercises to the more complicated instructions where special methods and tools are required. All work is done from working drawings, and commercial shop methods are constantly employed.

270. *Woodwork.*

FRESHMAN CLASS; COURSES IV, V, VI, VII.

Use and care of tools; graded exercises in carpentry, joining, wood-turning; construction of articles from working drawings; use of turning lathe and other simple machinery; construction of boxes, desks, etc., involving dove-tailing, gluing, polishing, etc.

271. *Woodwork.*

FRESHMAN CLASS; COURSES I, II, III.

The work is given for two terms only, and is the same as Course 270, except that a study of farm structures, such as fences, gates, houses, etc., is substituted for a part of the work given in Course 270.

272. *Woodwork---Pattern Making.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

Use of wood-working machinery, as planer, jointer, moulder, mortise and tenoning machine, carving and paneling machine, shaper, circular and jig saws. Pattern work, with graded exercises, illustrating the principles of draft and shrinkage, and teaching the construction of core prints, core boxes, etc. Patterns for machines under construction. Cabinet work, and furniture construction, as chairs, desks, bookcases, hall-stands, etc.

For description of equipment, see page 78.

CHEMICAL DEPARTMENT

Professor Hardin, Director.

Chemistry and Metallurgy

Professor Hardin

Associate Professor Brackett.

Assistant Professor Henry

Assistant Professor Hall.

*Assistant Freeman**

300. *General Chemistry*

SOPHOMORE CLASS; ALL COURSES.

In organic chemistry and the leading facts and principles of organic chemistry. First term, non-metals; second term, metals; third term, organic chemistry.

Text-book: Roscoe's Elementary Chemistry.

301. *Chemical Laboratory*

SOPHOMORE CLASS; ALL COURSES.

Introductory work and qualitative analysis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. *Industrial Chemistry.*

JUNIOR CLASS; COURSES I, II, III, IV, VII.

The applications of chemistry in the more important arts and manufactures. Among the subjects studied are: Sulphuric acid; soda; chlorine; potash salts; fertilizers; lime; mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. *Chemical Laboratory.*

JUNIOR CLASS; COURSES I, II, III, IV, VII.

Qualitative and quantitative analysis. A short course in assaying is given in the agricultural courses, and a fuller course in assaying in the metallurgical course.

*Acting also instructor when necessary.

Books used: Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Notes on Assaying.

304. *Agricultural Chemistry.*

SENIOR CLASS; COURSES I, II, III.

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the composition and manufacture of fertilizers, the composition of feeding stuffs and dairy products.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman.

305. *Chemical Laboratory.*

SENIOR CLASS; COURSES I, II, III.

Quantitative analysis of fertilizers, soils, ashes of plants, water, cattle foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing methods of analysis adopted by the Association of Official Agricultural Chemists.

306. *Physical Chemistry; History of Chemistry.*

SENIOR CLASS; COURSE IV.

Text-books: VanDeventer's Physical Chemistry; Venable's History of Chemistry.

310. *Metallurgy.*

SENIOR CLASS; COURSE IV.

Text-book: Sexton's Elementary Text-book of Metallurgy.

311. *Chemical and Metallurgical Laboratory.*

SENIOR CLASS; COURSE, IV.

For description of buildings and equipment, see page 79.

DEPARTMENT OF TEXTILE INDUSTRY.

Professor Doggett, Director.

Details of Instruction.

In carding and spinning, after the subject of raw material has been completed, machinery and processes used in the production of cotton yarns will be taken up systematically, going into a detailed examination and explanation of the separate machines and the mechanisms peculiar to them. Calculations for making changes of gears, speeds, production, etc., and practical operation of each machine will be required.

In designing, instruction begins with explanations of the principles of representing weaves on design paper, after which the designing of plain, simple weaves, laying out of harness drafts, pegging plans, etc., are taken up, advancing into the designing of more complicated weaves usually made on harness. After the completion of harness weaves the time will be devoted to designing of Jacquard weaves and tying up of Jacquards. The aim of the instruction in designing will be to develop originality in the student.

The practical work in weaving is laid out to parallel the instruction in designing. The first part of the instruction in this work will be on hand looms. After the completion of that amount of work required on hand looms, the student is advanced to plain and fancy power looms, where, in addition to the practical operation of weaving, the loom will be analyzed and explained in detail, together with timing and setting all working parts. The latter part of this work will be on Jacquards.

Cloth analysis consists in dissecting samples of various kinds of cloth to ascertain the weave, texture, weight per yard, and the counts of yarn used in its construction. The students are required to reproduce some of these patterns on the looms of the school.

The work in textile chemistry and dyeing covers inorganic quantitative analysis; the general principles of organic chemistry, with special reference to the coloring matters; the preparation of mordants and dyes, and the application of them to the several textile fibres.

Mill construction, ventilation and fire protection will be discussed. Also the organization and relations of the various departments of an industrial establishment, the determination of costs of production and of the effect on costs of different systems of distributing indirect expenses. As occasion offers, addresses will be given by men of prominence who are interested in the cotton industry or in the manufacture of mill machinery.

Care is taken to develop accuracy in observation, neatness and clearness in written reports; and to this end each student is required to submit a comprehensive report—including the necessary notes and references from standard works on the subjects—of every experiment performed by him. By this method each student is able to

verify for himself in the laboratory, the truth of the principle stated to him in the classroom.

Each student will be required to submit an organization and a list of the machinery equipment, for several different sizes of mills, making different classes of products.

In all the divisions of this department the lecture work, so far as is necessary, will be illustrated with drawings and lantern slides.

Carding and Spinning

Assistant Professor Earle. D. E.

400. *Raw Material; Cotton Grading*

JUNIOR CLASS; COURSE VII.

That the manipulation of cotton fibres may be carried out successfully, under various conditions, it is essential that the characteristics peculiar to the cotton fibre should be understood. Therefore, the introductory work of the students of this department is to examine the physical properties of cotton fibres, to ascertain their grade, lengths of staple, spinning qualities, color, harshness and softness, and to determine their suitability for making various kinds of yarns, filling, warp, ply yarns, etc. This study of fibres will not be limited to American cottons, but will include the more important commercial cottons of the world. The effects of temperature and humidity on fibres will be fully discussed. Also the handling of cotton prior to manufacturing processes, together with the injury to cotton fibres therefrom.

401. *Opening and Mixing.*

JUNIOR CLASS; COURSE VII.

Beneficial effects of opening and airing cotton; length of time to air for best results; effect on resultant yarn if not properly opened; necessity of mixing: when to mix cottons and methods of carrying out same: effects of improper mixing; effects of a judicious mixing on the after processes of manufacture; reasons for blending; effects of blending cottons on the resultant yarn, for strength, appearance, cost, etc.; effects on finished products if cottons are not properly mixed or blended.

402. *Picker Room*

JUNIOR CLASS; COURSE VII.

Proper situation of picker room; arrangement of machinery in same; automatic feeder; purpose for which used; construction, adjustment of parts, etc.; action on cotton; manner of connecting them to breaker lappers with and without dust trunks; advantages of dust trunk; facilitating good results by proper care; breaker lapper, use, explanation of parts, beaters used, adjustment of working parts and

experimenting with different speeds of beater; intermediate and finisher lappers, necessity of using same, construction, speeds, care of beaters, kinds of beaters, speeds of beater for different lengths of staple; evener motion and its control of feed rolls; adjustment of grids to regulate amount of waste, disposition of waste; regulation of air current; effects of air current on proper working of the lapper; lap formation; calculation on above machines for drafts, length of lap, etc.

403. *Carding.*

JUNIOR CLASS; COURSE VII.

Purpose of carding; principle upon which cards are built; comparison of types of cards; explanation of purpose and construction of feed plate, licker-in, cylinder, flats, screens, doffer, coiler head, etc., different settings of cards to produce best results on different lengths and qualities of fibre; regulation of waste; amount of graft; grinding; effects of improper grinding on card clothing and fibre; calculations for changing gears and speeds of various working parts.

404. *Railway Heads and Drawing Frames.*

JUNIOR CLASS; COURSE VII.

Purpose, use, construction, advantages and disadvantages of railway heads; explanation of stop motions, evener; principle of drawing slivers; purpose of drawing frame; comparing work of leather-covered and metallic rolls; adjustment of rolls; distribution of draft between the rolls; speeds, stop motions; all calculations on above machines, drafts, production, etc.

405. *Fly Frames.*

SENIOR CLASS; COURSE VII.

Slubber, intermediate, fine roving and jack frames; construction, care and operation of the modern fly frame; bobbin and flyer lead machines; advantages of the bobbin lead; detailed explanation of working parts, differential motion, horse head, builder, full bobbin stop motion, etc.; adjustment of drawing rolls; calculations for draft, twist, lay, tension and other gears.

406. *Yarn Manipulation.*

SENIOR CLASS; COURSE VII.

In this branch of work is included twisting; reeling; bundling; spooling; beaming. The slasher, construction and use; necessity for sizing; creels, cylinders, size boxes, etc.; mixing of size; different sizing ingredients for special purposes; method of preparing warps for the slasher; various calculations regarding each of the above processes.

407. *Combing.*

SENIOR CLASS; COURSE VII.

Sliver lap machine, its construction, use, etc.; care and operation; leather-covered rolls; metallic rolls; ribbon lap machine, its construction, use, etc.; advantages of using same; care and operation; lap formation; combing machine, its use, care and operation; detailed explanation of working parts, cylinder, half laps, segments, detaching rolls, etc.; with rules for adjusting and timing same; regulation of waste made; necessity of the process; relation of the process to fine smooth yarns; practical experience in adjusting above machines; calculations for change gears, etc.

408. *Spinning Frames.*

SENIOR CLASS; COURSE VII.

Construction of the modern ring spinning frames; purpose of ring spinning; discussion of its principal parts; rings and ring-holders; various types of spindles in use; speed of spindles; weights, sizes, and speeds of travellers; warp, filling and combination builder motions; speeds and settings of rolls for different lengths of staple; effects of twist on the strength, color and elasticity of yarns; calculations for draft, twist, production and various constants.

409. *Spinning Mules.*

SENIOR CLASS; COURSE VII.

Construction and operation of the self-acting spinning mule; special features; description of the head stock; cam shaft, copping rail, nosing motion, easing motion, jacking motion, twisting at the head, etc.; different movements in the mule and timing of the same; formation of a cop; characteristics and uses of mule spun yarn; calculations for draft, twist, builder, gear, etc.

Text and Reference books: Nasmyth's Student Cotton Spinner; Tompkins' Cotton Mill Processes and Calculations; Taggart's Cotton Spinning; Monie's Sizing and Sizing Compounds.

For description of equipment. see page 82.

Weaving and Designing.

Assistant Professor McSwain.

410. *Hand Loom Weaving.*

JUNIOR CLASS; COURSE VII.

The first practical work in weaving is on the hand loom. These hand looms have 4x4 box motion and 30 harness dobbies. After the design and necessary calculations have been made the student proceeds with dressing, drawing-in, reeding, tying the warp in loom, building harness chain and starting up loom; producing different weave effects from the same drawing-in draft by changing the harness chain; using box motions for color effects; combining two or

more systems of filling with one system of warp, two or more systems of warp with one system of filling, two or more systems of warp with two or more systems of filling to produce figured fabrics of a special character; explanation of the different methods used in raising and lowering the harness.

411. *Power Loom Weaving.*

JUNIOR AND SENIOR CLASSES; COURSE VII.

Power loom weaving will be taken up after the student has finished the required amount of hand loom work, and will include a study of the plain or cam loom; cam motions used for raising and lowering the harness, such as the under cam, side cam, etc.; setting cams; sketching cams to produce a given motion; arrangement of strapping for two, three, four, and five harness; timing cams to suit the number of harness used; speed of different width looms on the same class of fabrics; selection of temples and measurements for same; Draper loom; warp stop motion, filling change mechanism, etc.; the dobby analyzed and explained; methods of shedding; head motions; harness chains for single and double index dobbies; chains for head motions; explanation of box motions, four by one, four by four box, etc.; building box motion chains; explanation of multipliers used on box motions and harness motions; let-off motions, Morton, Bartlett, Shepard, and friction let-offs; open and closed shed machines explained; single and double index dobbies, etc.

412. *Designing.*

JUNIOR AND SENIOR CLASSES; COURSE VII.

Purpose of designing, explanation of "warp" and "filling;" representing weaves on design paper; foundation weaves; plain or cotton weaves; weaves derived from plain weaves, such as rib and basket weaves; twill weaves and methods of construction; derivative weave from twills, such as broken, steep, skip, reclining and curved twills; corkscrew twills, entwining twills; satin weave and the purpose of same; weaves derived from satins, such as double satins and granites; shading of satins; figured effects produced by using warp and filling satins; color effects produced by using two or more colors in the above fabrics; methods of constructing granite weaves; points to be considered in combination weaves; special weaves; honeycombs gauze and imitation gauze, bedford cord, plain and fancy piques, matelasses, etc.; two systems of warp and one system of filling, or two systems of filling and one system of warp for the purpose of figuring; explanation of double cloth, purposes, and class of fabrics in which generally used; representing double cloth weave on design paper; use of different proportions of "back" and "face" for special effects; methods of stitching double cloth so that the stitching will produce a figuring effect; stitching so that it will not show either on "face" or "back" of cloth; leno weaves and method of representing on design paper; methods of making drawing-in drafts, plain and fancy drafts, point, skip, mixed or cross draws; chain drafts; rules for finding the number of heddles required for each harness; meth-

ods used in reducing weaves to the lowest number of harness.

413. *Jacquard Designing*

SENIOR CLASS; COURSE VII.

Explanation of the various Jacquard machines; methods of shedding, such as the rise and drop, single lift, double lift machines; single and double cylinder machine; open and closed shed machine; drawing of tie-ups, straight tie-up, both in French and English system, point tie-up, combination tie-up for special goods, as table damask, Marseilles quilts, etc.; practical operation of tying-up a Jacquard, cutting leaches, threading of comber board, tying on and leveling up mail eyes; figuring comber board for a given texture of goods; casting out hooks to reduce texture of goods without retying the harness, cutting and lacing cards for a given design; selection of design paper for different fabrics, with regard to picks and ends per inch used; methods used in laying out the figure for a Jacquard design; enlarging the sketch for design paper. Instruction will also be given in the principles of special weaves, such as swivel weaving, lappet weaving, chenille and pile fabrics as used for rugs, carpets, etc. The harmony and contrast of colors will also be discussed.

414. *Cloth Analysis.*

SENIOR CLASS; COURSE VII.

Methods of arranging cloth sample for analysis; figuring the counts of cotton, woolen, worsted, and silk yarns; calculations for converting one system of yarn into that of another; finding the weight of cloth per yard and the counts of yarn used in its construction from the analysis; figuring width of warp in reed and number of reed to use to produce a given width and texture when woven; calculations to determine the cost of producing a fabric having given values of material, labor, counts, picks and ends per inch, weight per yard, etc.

This work takes up all representative classes of weaves that can be woven on harness, and gives the student a thorough knowledge of figuring yarns, weight of cloth, ends and picks per inch, etc.

Reference Books: Ivey's Loom Fixing; Fox's Mechanism of Weaving; Posselt's Technology of Textile Designs; Homes' Cotton Cloth designing.

For description of equipment, see page 84.

Textile Chemistry and Dyeing.

Professor Doggett.

420. *Textile Chemistry*

JUNIOR CLASS; COURSE VII.

To the qualitative and quantitative analysis of the general course is added a course of lectures in inorganic chemistry especially relating to the materials used in the various textile processes of mordanting,

fixing, scouring, bleaching, etc. Also lectures on organic chemistry, taking up as much of the aliphatic series as is necessary for an understanding of the chemical reactions involved in the application of these compounds to textile operations, and to prepare the student for the study of the aromatic compounds. Toward the end of the year the discussion of the simpler aromatic compounds is begun as an introduction to the special work on synthetic dyestuffs in the senior year.

The laboratory work will include the preparation of typical compounds of each class of derivatives taken up in the lectures.

421. *Dyeing.*

SENIOR CLASS; COURSE VII.

A course of lectures is given which covers that portion of the aromatic series which has reference to the study of the principal synthetic dyestuffs. The laboratory work consists of the preparation of certain typical dyestuffs and the study of their reactions. A complete written report of each experiment is required of the student, and written reviews are given each month on the subjects covered in the lectures and laboratory work. The purpose of the course is to give the student an understanding of the chemistry of the operations by which coal tar products are separated, purified and converted into dyestuffs.

A course of lectures is also given on the application of the different classes of dyestuffs to the various fibres, together with the chemical and physical properties of the latter; bleaching and mercerizing of cotton yarns and cloth; scouring and bleaching of wool; the manufacture of artificial silk; calico printing etc. In the laboratory the dyeing of cotton and wool is carried on in an experimental way, a study being made of typical dyestuffs of each of the principal classes. In the dye-house the dyeing of larger quantities of cotton and wool is carried on, as well as the bleaching and mercerizing of cotton, scouring and bleaching of wool, and the printing of calico.

The student is required to make a written report of each experiment performed, accompanied by samples of the dye material, which have been subjected to the action of various agencies, such as light, acids, alkalies, etc.

The purpose of this training, taken in connection with the work preceding it, is to serve as an introduction to the work of the practical dyer, and to prepare the student for the position of chemist in textile establishments. The constant aim of the instruction is to point out the chemical reactions at the foundation of the above textile operations, so that the student going into practical work in the mills will have at his command scientific knowledge sufficient to enable him to study intelligently such problems as may come before him in his line of work.

Reference Books: Ritcher's Organic Chemistry; Bernthsen's Organic Chemistry; Holleman's Organic Chemistry; Allen's Commercial Organic Analysis; Heermann's Dyer's Materials; Schultz & Julius' Organic Coloring Matters; Georgievics' Chemical Technology of Textile Fibres; Georgievic's Chemistry of Dyestuffs; Kenecht,

Rawson & Lowenthal's Manual of Dyeing; Beech's Dyeing of Cotton Fabrics; Hummel's Dyeing of Textile Fabrics; Frap's Principles of Dyeing.

For description of equipment, see page 84.

ACADEMIC DEPARTMENT

English

Professor Furman.

Associate Professor Daniel.

Assistant Professors Keitt, Bryan, Bradley.

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

500. *English Grammar and Word Studies.*

PREPARATORY CLASS.

This class is carefully prepared for entry upon the work of this College, several of the professors in English having charge of its sections. The intention is to make the English course continuous, so that there may be no break between the preparatory and freshman work, either in teachers or text-books. The books used in the preparatory class are Buehler's Grammar, Gilbert's Studies in Words, and such reading texts as may from time to time be selected by the instructors. Special attention is paid to spelling, definition of words, oral reading, and written exercises.

501. *English Grammar, Reading and Composition.*

FRESHMAN CLASS; ALL COURSES.

A review of the subject of grammar introduces the work of this class. Constant drill is given in theme writing; pupils being expected to make use of the College library under direction of instructors. Methods of using dictionaries, encyclopædias, and other reference books are explained practically to the students. Full supplementary readings are required, and practice is given in the writing of abstracts of books so read.

Text-books: Emerson-Lockwood's Lessons in English; Buehler's Practical Exercises in English; Webster's School Dictionary, and such English classics as may be assigned.

502. *Composition, Rhetoric, American Literature.*

SPHOMORE CLASS; ALL COURSES.

The study of composition and rhetoric is pursued throughout the year, with special emphasis laid on practical composition. Carefully written themes are required weekly. The course in American Literature includes a consideration of the development of American

literature, brief biographies of the leading authors, and a careful study of selections from their chief works. The course of parallel reading is taken from both American and English writers.

The text-books are: Newcomer and Seward's *Rhetoric in Practice*, Woolley's *Hand-Book of Composition*, and Painter's *introduction to American Literature*. The parallel reading for 1908-1909 consisted of Franklin's *Autobiography*, Irving's *Alhambra*, Gaskell's *Cranford*, *Southern Poets*, Hayne's *Speech*, Hawthorne's *Scarlet Letter*, Dickens' *Tale of Two Cities*, Palgrave's *Golden Treasury*, and Sheridan's *Plays*.

503. *English Literature.*

JUNIOR CLASS; ALL COURSES.

The work in the Junior class begins with the critical study of Macaulay as an essayist. This is followed by a general course in English literature. Pancoast's *English Literature* is the text-book—this work being supplemented by lectures. Monthly essays are required, and frequent oral readings, embracing selections from the principle English authors from Chaucer to the present time.

504. *Studies in Shakespeare.*

SENIOR CLASS; ALL COURSES.

This class is given instruction in the principles of literary criticism. A somewhat full course in Shakespeare study is furnished. Several plays are read in class—the students being orally examined on all questions, grammatical, historical and ethical, which arise in the study of this author. Monthly essays are required.

History and Political Economy

Professor Morrison.

Assistant Professor Holmes.

The course includes history of the United States, South Carolina history, general history, commercial geography, and political economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The classrooms are supplied with globes, charts, maps and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College library.

The history of South Carolina and the history of the South receive special attention. "A people which takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

510. *United States History.*

PREPARATORY CLASS.

Text-book: *A School History of the United States*, by White.

511. *South Carolina History.*

FRESHMAN CLASS; ALL COURSES.

Text-book: Weber's History of South Carolina.

512. *Commercial Geography.*

FRESHMAN CLASS; ALL COURSES.

Text-book: Olin's Commercial Geography.

513. *Civics.*

FRESHMAN CLASS; ALL COURSES.

Text-book: Training for Citizenship, by Smith.

514. *General History.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

JUNIOR CLASS; COURSES I, II, III.

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediæval and Modern History.

515. *Political Economy.*

SENIOR CLASS; ALL COURSES.

Text-book: Gide's Principles of Political Economy, second American edition (1904).

Mathematics*Professor Martin.**Associate Professor Shanklin.**Assistant Professors Hunter, Johnstone, Bramlett.*

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics. (See requirements for admission, page 26.)

520. *Algebra.*

FRESHMAN CLASS; ALL COURSES.

Review of involution, evolution, theory of indices and quadratics; simple intermediate equations; inequalities; proportion and variation; logarithms.

Text-book: Well's Text-book in Algebra.

521. *Geometry.*

FRESHMAN CLASS; ALL COURSES.

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles. Plane and solid angles; polyhedrons; cylinders and cones; spheres,

spherical polygons and pyramids; volume. Special attention is given to the formation, on the part of students, of the habit of clear and accurate reasoning and concise expression.

Text-book: Gori's Plane and Solid Geometry.

522. *Trigonometry.*

SOPHOMORE CLASS; ALL COURSES.

Measurements of angles; trigonometric functions; right triangle; goniometry; relations between functions of one angle; functions of multiple angles; inverse functions; trigonometric equations; oblique triangles; De Moivre's theorem; spherical trigonometry; general formulas; right spherical triangle; oblique spherical triangle; applications.

Text-book: Well's Plane and Spherical Trigonometry.

524. *Higher Algebra.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

Progressions; binomial theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-book in Algebra.

525. *Analytic Geometry.*

SOPHOMORE CLASS; COURSES IV, V, VI, VII.

JUNIOR CLASS; COURSES V, VI, VII.

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of second degree involving two variables; higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Tanner and Allen's Analytic Geometry.

526. *Differential Calculus.*

JUNIOR CLASS; COURSES V, VI, VII.

Differentiation of algebraic functions; transcendental functions; successive differentiation and development of functions; functions of two variables; tangents and asymptotes; maxima and minima; radius of curvature; evolutes and involutes; envelopes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

527. *Integral Calculus.*

JUNIOR CLASS; COURSES V, VI, VII.

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions

of two variables; lengths of curves; areas of plane curves; rectification of curves; cubature of volumes.

Text-books: Snyder and Hutchison's Differential and Integral Calculus.

Modern Languages.

Professor Doggett.

The course in German and French are designed to give the student general training and culture and to enable him to make use of the languages as an instrument in scientific research.

The course in French is now being arranged.

540. *German*

COURSES I, II, III, VII.

The essentials of German grammar; collateral reading; translation of easy German prose; prose composition.

541. *German*

COURSES I, II, III, VII.

German syntax; study of German idioms and prefixes; composition based on a text; translation of literary and scientific German prose and of easy poetry; translation at sight from German current literature and scientific periodicals.

Text-books: Paul V. Bacon's German Grammar for Beginners; Goethe's *Die neue Melusine*; Zschokke's *Der tote Gast*, or similar texts; Wait's German Science Reader; one of Schiller's plays.

Reference Books: Curme's Grammar of the German Language; Blackwell's German Prefixes and Suffixes; Eberhard-Lyon's *Synonymisches Handwörterbuch*; Heath's German Dictionary.

MILITARY DEPARTMENT

Captain Stokes, U. S. Army, Director.
Commandant of Cadets.

Military Science and Tactics

Captain Stokes.

The course in military instruction, as prescribed and followed, is both theoretical and practical.

600. *Tactics and Elements of Military Science*

JUNIOR CLASS; ALL COURSES.

The theoretical instruction, given by recitations and lectures, includes the following, as prescribed by the War Department: The Infantry Drill Regulations, including the School of the Battalion in both close and extended order; the Manual of Guard Duty.

601. *Military Science*

SENIOR CLASS; ALL COURSES.

Small-Arms Firing Regulations; the Articles of War, with special reference to Articles 4, 8, 15, 20, 21, 22, 23, 24, 32, 38, 39, 40, 42, 44, 46, 47, 50, 55, 57, 61 and 65. Also the following records: Enlistment and discharge papers including descriptive lists; morning reports; field and monthly returns; muster rolls; rosters; ration returns; requisitions; property returns.

In addition, ten lectures are given each year upon the following subjects: Two lectures on the organization of the United States army; one lecture on patrols and outposts; one lecture on marches; one lecture on camps and camp hygiene; three lectures on lines and bases of operations; two lectures on the attack and defense of advance and rear guards, outposts and convoys.

The articles of war specifically mentioned are among the most important for the young officer to know on first entering service. The records for study should be thoroughly understood by all graduating cadets, because they show how the soldier enters and leaves the service; how he is accounted for, paid, fed, clothed, armed; and how his military duties are regulated.

602. *Military Drill*

REQUIRED OF ALL CADETS.

Drill regulations, including the school of the battalion through close and extended order; advance and rear guards and outposts; marches; the ceremonies of battalion review, inspection, parades, guard mounting, and escort of the colors; infantry target practice; instruction in first aid to the injured; guard duty.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

ORGANIZATION AND MODE OF
GOVERNMENT
GENERAL INFORMATION

ORGANIZATION AND MODE OF GOVERNMENT

The following extracts from the book of "Regulations" explain the organization and mode of government of the corps:

Organization

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothings, equipments, etc., shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc., of the cadets at least once each week, and make a report thereon to the President."

"3. For instruction in tactics and for military police and discipline the corps of cadets will be organized into one or more battalions of two or more companies each, and a band when practicable. In case the number of cadets will permit of the formation of two or more battalions, the organization will be regimental."

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties and most exemplary in their general deportment. As a rule, the cadet captains and lieutenants will be

selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

"5. The field and staff shall consist of two cadet majors, two cadet lieutenants and adjutants, one cadet captain and adjutant, one cadet captain and quartermaster. The non-commissioned staff shall consist of one regimental sergeant-major, one regimental quartermaster-sergeant, two battalion sergeant-majors, and one regimental color-sergeant."

"6. In each company there shall be one captain, two lieutenants, one first sergeant, one company quartermaster-sergeant, and as many sergeants and corporals as may be required."

"7. Each of the battalions will be commanded, when on drill, and at such other times as the Commandant of Cadets shall direct, by its cadet major.

"8. On the graduation of every class the Commandant of Cadets shall obtain the names of such cadets as shall have shown special aptitude for military service, and furnish a list thereof to the Adjutant-General of the State for his information. A copy of this list will also be sent to the Adjutant-General of the United States army, and the names of the three most distinguished students in military science and tactics will, when graduated, be inserted in the United States Army Register."

Leave of Absence

Communication from parents, requesting leave of absence from the College for their sons, must be addressed directly to the President, and not through the cadets.

The rules governing in case of permits to visit home during the session of the College require that cadets who have accumulated more than eight demerits in any one term, and who have fallen below grade two in their studies

on any report, will not be allowed to leave College during the term except in cases of extreme sickness or death in the family.

No leave of absence or honorable discharge will be granted after May 1st, except for serious causes.

A student who has been granted leave of absence and who stays over the date allowed, unless for sickness or other good and valid reason, will lose his place in the College and will be required to file a new application for admission and to pay the matriculation fee of \$5 again before being allowed to re-enter. In case of sickness, a certificate from the attending physician must be submitted.

General Regulations

In addition to the special regulations of the military department, a copy of which is given each cadet, the following general regulations are enforced:

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks except those who live with their parents or relatives near enough to attend from their homes.

Each student is required to purchase the prescribed uniform; also a pair of overshoes and a waterproof coat. Students may provide themselves with such work-clothes as they desire.

Those occupying a room are consulted before another student is assigned to that room. A student not satisfied with his roommate has the privilege of applying for permission to move to another room, and such applications are granted when practicable.

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

The practice known as "hazing" is positively forbidden. All cadets, upon matriculation, shall be required to sign a pledge not to indulge in hazing or injuring in any form the person of any cadet or give countenance or encouragement thereto while a member of the corps of cadets. Any cadet indulging in this practice will be dismissed from the College.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

If any cadet shall consider himself wronged by another, or by an officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

Cadets are forbidden to keep any firearms or other weapons in their possession not issued by the proper authority.

Any cadet receiving 66 demerits during a College term shall be brought before the Discipline Committee and shall be dismissed, or less severely punished.

Any cadet who leaves barracks without authority between retreat and reveille shall be dismissed.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Cadets who receive no demerits during any calendar month will be given a credit of eight, to be applied in removing any demerits they may have had charged against them during any preceding months of that term.

Religious Exercises

Chapel Services.—There is preaching in Memorial Hall

every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by the President and members of the Faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday school, at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ, as their divine Lord and Saviour; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and daily chapel exercises. These activities include: a religious service on Sunday evening, a mid-week prayer-meeting on Wednesday evening, a daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

The Bible department offers four courses of study; two on the life of Christ; one, studies in the life of St. Paul; and the fourth a study in the Old Testament. These classes meet on Sunday evening and are led by students; these student leaders are prepared for this work through training classes led by members of the faculty, the local ministers and the general secretary. During the past year 380 cadets were enrolled in 40 of these group classes. This department also conducts Bible institutes and special train-

ing conferences. A week's series of Bible lectures, delivered by some recognized biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervision of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. A small, but select, library is kept in the office of the general secretary, where it is always accessible to the members.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts, cannot be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the college, either as a disciplinarian or instructor; neither is he a College preacher. But he is an older and more experienced student employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. His office is in room 84, old barracks, where he will be glad to meet all students.

Parents and students desiring further information should write to the general secretary at the College, or to the president, Cadet N. E. Byrd.

Care of the Sick.

The Surgeon is one of the regular officers of the Col-

lege, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

Parents will be kept fully informed of the condition of sick students. The Surgeon, however, cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. Parents may always rest assured that they will be promptly notified of sickness of any consequence; and in case of serious illness the surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and, when practicable, students are employed in this work, and are paid at the rate of eight cents an hour. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbia and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parlia-

mentary law and usage. The meetings are held weekly, on Saturday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small fee is charged for initiation, and there are also monthly dues of a few cents to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman University, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications By the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An annual, an illustrated volume, is published under the auspices of the senior class.

There is also *The Tiger*, published bi-weekly, which is devoted largely to athletics.

Science Club

The Clemson College Science Club was organized for

the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the Faculty and advanced students of the College.

The Clemson Biological Club

This club is open to members of all the faculties of Clemson College and to all students. Its object is to stimulate interest in biological subjects, and to keep its members fully abreast of current biological work and thought.

A regular meeting is held once each week in the Agricultural Hall.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1908-1909 the following lectures and concerts were given:

1. Victor's Band.....October 14
2. Dr. H. W. Sears.....October 21
3. Caveny Co.....November 23
4. Frederick WardeNovember 28
5. Commonwealth Orchestra.....January 9
6. Shungopavi Yuma Co.....February 6
7. DeWitt MillerFebruary 13
8. DeKoven Quartette Co.....February 20

Cadet Exchange

A Cadet Exchange is maintained, where students may purchase at wholesale prices necessary articles, such as books, stationery, collars, cuffs, underwear, etc.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies

and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.), and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.).

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an athletic Council, consisting of members of the Faculty and of the student-body. This council consists of nine members—two members of the Faculty, the president and secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty, chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. *Monthly Standing.*—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. *Sessional Standing.*—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the next college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. *Student Taking Class Over.*—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play, unless he passes in the first and second terms without any failures, and is otherwise eligible.

4. Graduate Students.—No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work; that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. Irregular or Special Student.—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Committee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

Field Day.—May 1st is observed as a holiday for contests in track and field athletics, such as running, hurdling, high and broad jumping, pole-vaulting, hammer-throwing, putting the shot, etc., and is known as "Field Day."

Donations

William P. White.—Flag staff, with following inscription:

This Staff, sawed out of the heart of a Palmetto Tree, cut upon one of the Sea Islands adjacent to Beaufort and Port Royal, and fashioned by me into a Flag Staff, is considered as an appropriate Staff for a State Company Banner, being from a historic and emblematic tree of the Coat of Arms of South Carolina, is presented to the Corps of Cadets of Clemson College by Mr. William P. White, my grandson, now a student of Clemson, of the Senior Class of 1905-1906, and who in my behalf and in his own, will make the appropriate presentation.

THOMAS G. WHITE.

Beaufort, S. C., Sept. 19, 1905.

MECHANICAL DEPARTMENT.

Keuffel & Esser Company, New York.—One 80-inch slide rule.

Lunkenheimer Company, Cincinnati, Ohio.—Sections of valves and injector.

The Continental Iron Works, New York.—Section model of internal furnace boiler.

Mica Insulator Company, New York.—Mounted samples of micanite.

Electric Storage Battery Company.—Mounted storage battery plates.

R. Thomas' Sons Company.—Samples of high voltage insulators.

Xylotite Manufacturing Company.—Two xylotite pulleys.

TEXTILE DEPARTMENT.

The A. T. Atherton Machine Company, Pawtucket, R. I.—One automatic feeder; one finisher lapper; one lot lap-rods; half-value on breaker lapper.

Saco & Pettee Machine Company, Newton Upper Falls, Mass.—One 40-inch revolving top flat card; one Entwistle traverse grinder; one Entwistle drum grinder; one burnisher; one set carder's tools; one improved railway head, with back, front and full can-stop motion; one four delivery draw frame, with back, front and full can-stop motion, fitted with single preventer rolls; one 40-spindle slubber; one 60-spindle intermediate roving frame; one 80-spindle fine roving frame; one 128-spindle combination warp and filling ring spinning frame; one 72-spindle improved spooler. A sufficient number of gears were sent with these machines to make various changes that may be necessary.

Mason Machine Works, Taunton, Mass.—One 40-inch revolving top flat card; one Entwistle drum grinder; one stripper brush; one set carder's tools; one railway head, with back, front and full can-stop motion; one four delivery draw frame, with back, front and full can-stop motion, fitted with single preventer roll; one 112-spindle combination warp and

filling ring spinning frame; one 40-inch plain loom; one 36-inch fancy cotton loom; one 36-inch, 24-harness dobby loom; half value on combing machinery. All necessary gears with these machines to make the required changes.

The D. A. Tompkins Company, Charlotte, N. C.—One adjustable reel; one draw-in frame; one loom box; one doffer box; two section beams; one switchboard, complete; one emery wheel and stand; one band machine; one saw tooth model gin; one spike-tooth model gin.

Draper Company, Hopedale, Mass.—One 40-inch Northrop loom; one 28-inch Northrop loom; one 48-spindle combination wet and dry twister; one 40-spindle spooler; one section warper; one ball warper; one Rhodes' banding machine, with Watt's patent marking device; section beams; temples as required; loom findings.

Crompton & Knowles Loom Works, Providence, R. I.—Half value on following: One 32-inch loom, with 416-hook Jacquard; one 32-inch loom, with leno attachment; one 65-inch 4 by 1 box loom, with 624-hook Jacquard; one 36-inch Knowles "Gem" loom; one 36-inch fancy cotton towel loom; one 30-inch Knowles fancy cotton loom, with 15-harness dobby; two 16-harness dobbies.

Universal Winding Company, Boston, Mass.—One six-spindle cone and tube winder.

Woonsocket Machine and Press Company, Woonsocket, R. I.—Half value on one 96-spindle jack roving frame.

T. C. Entwistle, Lowell, Mass.—Half value on one beaming frame.

Fales & Jenks Machine Company, Pawtucket, R. I.—Two combination warp and filling spinning frames, 80 spindles each; one wet twister, combined filling and taper top wind, 70 spindles; half value on twister like above, all necessary gears, etc.

T. B. Woods' Sons, Chambersburg, Pa.—One-fourth value on equipment of shafting, hangers and pulleys used

in new extension of building.

Jones & Laughlin Company, Limited, Pittsburg, Pa.—The entire original equipment of shafting, hangers and pulleys.

Whitin Machine Works, Whitinsville, Mass.—Half value on following: One 40-inch cam loom; one 40-inch loom, with 20-harness dobby; one 30-inch duck loom; two combination warp and filling ring spinning frames, 80 spindles each; all gears, etc.

Schaum & Uhlinger, Philadelphia, Pa.—One top engine drive, self-balancing, hydro-extractor.

The Metallic Drawing Roll Company, Indian Orchard, Mass.—Metallic drawing rolls for railway heads and draw frames as required.

Westinghouse Electric Company, East Pittsburg, Pa.—One 22 K. W. 220-volt direct-current motor.

The American Moistening Company, Boston, Mass.—Complete system of "Vortex" humidifiers, including pump, tank and connections.

Beattie Machine Works, Cohoes, N. Y.—One single elastic-stitch looper.

E. Jenckes Manufacturing Company, Pawtucket, R. I.—One "Invincible" seamless hosiery knitting machine.

W. W. Altemus & Son, Philadelphia, Pa.—One bobbin winder.

New Bedford Paper Company, New Bedford, Mass.—Cops, cones, tubes, etc., as required.

Charlotte Supply Company, Charlotte, N. C.—All belting, as required.

American Supply Company, Providence, R. I.—Heddles, heddle frames, reeds and loom supplies as required.

Loom Picker Company, Biddeford, Me.—Loom supplies.

The Emmons Loom Harness Company.—Cotton harness, reeds and loom supplies.

Roney & Rae Company, Woonsocket, R. I.—Twelve bobbin holders.

Steel Heddle Manufacturing Company, Philadelphia, Pa.—2,500 patented flat steel heddles.

R. A. Blythe, Philadelphia, Pa.—One lot mercerized yarns.

Barber & Coleman, Boston Mass.—One Barber knotter.

National Ring Traveller Company, Providence, R. I.—One lot of spinning and twister travellers.

DeHaven Manufacturing Company, Brooklyn, N. Y.—One lot of spinning and twister travellers.

Victor Shaw Ring Traveller Company, Providence, R. I.—One lot Spinning travellers.

Morley Button Manufacturing Company, Boston, Mass.—One lot spinning travellers.

Sykes & Street, New York, N. Y.—Collection of dye stuffs.

New York and Boston Dyewood Company, New York, N. Y.—Collection of dye stuffs.

Victor G. Bloede & Company, Baltimore, Md.—Collection of dye stuffs and mordants.

Cassella Color Company, New York, N. Y.—Large collection of dye stuffs.

Kuttroff, Pickardt & Company, New York, N. Y.—Collection of dye stuffs.

Farbenfabriken of Elberfeld Company, New York, N. Y.—Large collection of dye stuffs, over 300 samples.

H. A. Metz & Company, New York, N. Y.—Large collection of dye stuffs.

Grasselli Chemical Company, New York, N. Y.—Chemicals used in dyeing.

Schoellkopf, Hartford & Hanna Company, Buffalo, N. Y.—Large collection of dye stuffs.

Roessler & Hasslacher Chemical Company, New York,

N. Y.—Sodium Peroxide, for bleaching demonstrations.

Berlin Aniline Works, New York, N. Y.—Collection of dye stuffs.

Charles J. Fox, Philadelphia, Pa.—50 pounds textile soaps.

Kalle & Company, New York, N. Y.—Collection of dye stuffs.

A Klipstein & Company, New York, N. Y.—Collection of dye stuffs.

Woonsocket Reed and Shuttle Works.—Four self threading shuttles.

Southern Railway Company.—Half freight rates over their lines on entire original equipment of machinery.

Thomas Hattan Sons, Philadelphia, Pa.—One 264 Hook Jacquard.

Gaffney Mf'g. Co., Gaffney, S. C.—One 4x4 Box loom, (loaned.)

Donations to The Library

Since the publication of the last Catalogue, the Library has received gifts from the following:

Calhoun Text-book—Dr. P. H. Mell.

Life of Gen. Francis Marion, by Gen. Horry—Dr. P. H. Mell.

Life of Gen. Francis Marion, by Wm. Gilmore Simms.—Dr. P. H. Mell.

Useful Information for Practical Men—Du Pont Powder Co.

Report of American Breeder's Association, 4 vols.—David R. Coker.

Dictionary of Electrical Words, Terms and Phrases—Prof. T. G. Poats.

Year-book of United States Department Agriculture.—Mrs. P. T. Brodie.

American Ephemeris and National Almanac, 3 vols.—Mrs. P. T. Brodie.

Addresses and Proceedings of National Educational Association, 3 vols.—Mrs. P. T. Brodie.

North Carolina Geological Survey—Mrs. P. T. Brodie.

Register of American Saddle-Horse Breeders' Association—J. B. Castleman.

Report On Plan For Extermination of Mosquitos—F. E. Lutz.

Master of Men—Cadet A. J. Dozier.

Inorganic Chemistry—Prof. J. I. D. Hinds.

Handbook of South Carolina—Miss. M. L. Saddler.

The Children of The Abbey—Mrs. M. B. Rudd.

Old Pendleton Messenger, 3 vols., 1843, 1844, 1845—E. B. Benson.

Six Decades in Texas—J. B. Davis.

The Badische Book—The Badische Co.

Simms' History of South Carolina—I. S. Seabrook.

The Technical World Magazine—American School of Correspondence.

PAPERS.

The Prairie Farmer, The Practical Farmer, The Progressive Farmer, The Southern Farmer, Southern Farm Gazette, National Farmer and Stock Grower, American Agriculturist, Four-Trade News, Greenville Daily News, Anderson Daily Mail, Athens Banner, Abbeville Press and Banner, Our Monthly, The Baptist Press, Wool and Cotton Reporter, The Beaufort Gazette, Darlington Press, The Clinton Chronicle, Calhoun Advance, The Rock Hill Herald, Times and Democrat, Golden Age, The Daily Item, The Barnwell Sentinel, Oconee News, The Press and Standard, The Feld, The Anderson Intelligencer, American Economist, Cornell Countryman.

NOTE.—A special book is kept in which the record of every donation is preserved, and a special label, stating the name of the donor, is placed in each volume presented.

Donations to The Textile Museum

One reel, made by John Verner, a Revolutionary soldier; loaned by Miss Mary R. Shelor, Westminster, S. C.

One hand loom, loaned by Dr. W. B. Noffz, Cross Hill, S. C.

Samples ticking, from the Lexington Manufacturing Company, Lexington, S. C.

One copy of "The Cotton Gin—The History of its invention," by D. A. Tompkins. Presented by the author.

Seven hundred mounted cloth samples, from Marshall Field & Company, Chicago, Ill. Complete set of samples of cloth in demand in the Chinese market, showing defects of American goods, from United States Department of Commerce and Labor.

THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION.

The Agricultural Experiment Station of South Carolina is a department of Clemson Agricultural College. By action of the Board of Trustees the Station work was separated from the College work in order to enable the Station investigators to give their entire time to experiments and research problems relating to the agriculture of South Carolina. The Experiment Station is supported entirely by funds provided by acts of Congress known as the Hatch and Adams Acts, and its object is, according to the law, providing for its establishment, to aid in acquiring and diffusing among the people useful and practical information, to conduct scientific investigations, with reference to the principles and applications of agricultural science; to rectify experiments already made; to examine into the physiology of animals and plants, that remedies may be provided for the several diseases to which they are subject; to conduct such other researches relating to agricultural industry, and to make reports of progress or of results obtained, at least once in three months; to be distributed to the farmers of the State, who may request the same.

The following divisions are operating in the Station:—Agronomy and Soils, Animal Husbandry and Veterinary Science, Zoology and Entomology, Chemistry, Horticulture, and Botany and Plant Pathology. The offices and laboratories occupy a portion of the Agricultural Hall, while the Station experimental farm, consisting of about 200 acres, is located east of and adjoining the College campus, and is equipped with the necessary buildings, including foreman's residence, barn for the proper housing of tools, live stock, etc., the horticulturist's laboratory, and the dairy barns and silos. On this farm experiments are constantly in progress covering a large range of agricultural subjects

and these experiments are accessible to the inspection of College students.

Since the Station was organized, 141 bulletins and 21 annual reports have been issued. Nothing so readily gives practical value and general importance to Experiment Station work as an extended dissemination of the reports of its progress and accomplishment in the solution of agricultural problems. The work of distributing analyses of commercial fertilizers among the farmers of this State is continued. A leaflet of four pages containing the analyses is published at the College and mailed from the office of the Station secretary once a week for twenty-two weeks in editions of 14,000 copies. These leaflets are distributed with weekly regularity upon as many farms in the State. The purpose of this wide diffusion of the records of the chemical analyses is for the protection of the farmer against the purchase of fraudulent fertilizer. The total number of bulletins issued from this Station during the past fiscal year, including the fertilizer leaflets, amounted to 404,000 copies. A striking evidence of the growing interest in all matters pertaining to the publications of this Station is seen in the statement of the fact that the accession of 1,600 names on the permanent mailing list was made within the past year.

Some of the characteristics of the organization and work that give special importance to the South Carolina Experiment Station as a leading and influential department of Clemson Agricultural College are: The effective support of the Board of Trustees, well equipped laboratories, a good experimental farm, a corps of specialists conducting and directing the prosecution of research work in the various divisions, and supervising a correspondence that embraces and pervades every agricultural community in the State.

LIST OF GRADUATES 1908

NAME	COURSE.	COUNTY.
M. H. Ackerman	Agri.	Colleton
J. E. Alverson	Mech. Elec.	Spartanburg
S. E. Bailes	Agri. & Ani. Ind.	Lancaster
A. J. Baker	Agri.	Horry
A. T. Beaver	Civil	Richmond, Ga.
J. O. Bethea	Agri.	Marlboro
H. H. Brunson	Agri.	Orangeburg
J. M. Bryan	Civil	Charleston
R. B. Carpenter	Mech. Elec.	Pickens
C. L. Cannon	Agri.	Newberry
F. P. Caughman	Agri.	Richland
B. H. Covington, Jr.	Agri.	Marlboro
F. J. Crider	Agri.	Orangeburg
F. W. Crisp	Agri.	Laurens
E. P. Crouch	Civil	Charleston
S. J. Ezell	Agri.	Spartanburg
R. B. Ezell	Agri.	Spartanburg
R. H. Fike	Agri. & Ani. Ind.	Spartanburg
D. M. Fraser	Agri.	Barnwell
M. J. Funchess	Agri.	Orangeburg
E. V. Garrett	Civil	Laurens
W. P. Gee	Agri.	Union
T. Hamilton	Agri.	Hampton
J. H. Harvey	Agri.	Berkeley
D. N. Harris	Civil	Spartanburg
T. C. Heyward	Mech. Elec.	Beaufort
E. L. Hutchins	Agri.	Pickens
C. C. Johnson	Agri.	Spartanburg
A. G. Kennedy	Metallurgy	Union
M. R. Kimbrell	Mech. Elec.	York
W. W. Kirvin	Agri.	Darlington
W. W. Kirk	Mech. Elec.	Greenwood
J. C. LaBorde	Agri. & Ani. Ind.	Richland
A. C. Lee	Civil	York
J. W. Lewis	Agri.	Horry
J. P. Lewis	Mech. Elec.	Oconee

NAME	COURSE.	COUNTY.
J. C. Littlejohn	Mech. Elec.	Union
R. B. Lowry	Agri.	Chester
W. M. Lunn	Agri.	Florence
W. A. Mace	Agri.	Marion
C. W. Marston	Agri.	Virginia
F. L. Martin	Agri.	Horry
L. E. May	Agri.	Charleston
W. H. Maynard	Agri.	Greenwood
J. M. Miller	Mech. Elec.	Lexington
C. L. McCaslan	Civil	Greenwood
C. E. McLean	Agri.	Chesterfield
C. A. McLendon	Agri.	Lee
J. McG. Napier	Agri.	Marlboro
T. L. Ogier	Agri.	Charleston
O. M. Page	Civil	Marion
J. A. Phillips	Agri. & Ani. Ind.	Orangeburg
R. O. Poag	Mech. Elec.	York
W. O. Pratt	Civil	Greenwood
C. W. Rice	Agri.	Bamberg
L. G. Richardson	Agri.	Barnwell
H. B. Riser	Mech. Elec.	Laurens
W. J. Roach	Agri.	York
T. G. Robertson	Agri.	Laurens
O. Roper	Agri.	Marlboro
W. McL. Rosborough	Mech. Elec.	Chester
W. H. Rumff	Agri.	Orangeburg
J. B. Ryan, Jr.	Agri.	Sumter
M. L. Sandifer	Agri.	Bamberg
W. H. Scott	Agri.	Edgefield
R. G. Sessions	Agri.	Horry
S. H. Sherard	Agri.	Greenwood
J. Spratt	Civil	Chester
G. W. Speer	Agri. & Ani. Ind.	Abbeville
C. L. Stevens	Agri.	Berkeley
H. K. Strickland	Agri.	Colleton
A. C. S. Summers	Agri.	Orangeburg
W. K. Tavel	Civil	Charleston
W. A. Thomas	Agri.	Marlboro
D. L. Tindal	Agri. & Ani. Ind.	Clarendon
C. M. Trott	Civil	Charleston

NAME	COURSE.	COUNTY.
G. M. Truluck	Agri.	Sumter
Geo. Warren	Agri.	Colleton
L. O. Watson	Agri.	Greenwood
G. G. Weathersbee	Agri.	Aiken
W. N. Wells	Agri.	Lee
J. S. Wessinger	Agri.	Lexington
H. C. Wilburn	Agri. & Ani. Ind.	Union
M. G. Williams	Mech. Elec.	Pickens
F. B. Wise	Agri.	Florence

STUDENTS 1908-09

Senior Class.

NAME	COURSE	COUNTY
R. E. Adams	Civil	Edgefield
C. E. Baldwin	Agri. & Chem.	Greenville
G. M. Barnett	Agri. & Ani. Ind.	Oconee
D. L. Bissell	Agri. & Chem.	Charleston
R. E. Blake	Agri. & Ani. Ind.	Abbeville
J. R. Blair	Chem. & Geol.	York
L. B. Brandon	Agri. & Ani. Ind.	York
W. J. Brockington	Agri. & Ani. Ind.	Williamsburg
L. P. Byars	Agri.	Marion
E. Chamnes	Mech. Elec.	Marlboro
O. M. Clark	Agri.	Lexington
J. S. H. Clarkson	Mech. Elec.	Richland
E. D. Clement	Agri.	Charleston
S. Coles	Agri.	Richland
J. C. Covington	Civil	Marlboro
W. G. Dominick	Mech. & Elec.	Newberry
J. H. Earle	Civil	Pickens
W. J. Evans	Civil	Abbeville
F. Fleming	Agri. & Ani. Ind.	Greenville
D. P. Folk	Agri.	Bamberg
J. T. Folk	Civil	Newberry
E. E. Gary	Agri. & Chem.	Greenville
P. M. Gee	Mech. Elec.	Union
J. D. Graham	Agri.	Sumter
J. O. Graham	Agri. & Chem.	Williamsburg
H. H. Greene	Agri. & Ani. Ind.	Abbeville
A. L. Harris	Agri. & Chem.	Spartanburg
R. A. Harris	Mech. Elec.	Laurens
T. M. Hunter	Mech. Elec.	Newberry
W. G. Hyrne	Chem. & Geol.	Colleton
R. P. Jeter	Chem. & Geol.	Union
G. W. Keitt	Agri. & Chem.	Pickens
J. H. Lesesne	Mech. Elec.	Charleston
J. L. Marshall	Mech. Elec.	Marion
L. deB. McCrady, Jr.	Civil	Charleston

NAME	COURSE.	COUNTY.
H. W. McIver	Mech. Elec.	Chesterfield
J. P. McMillan	Mech. Elec.	Marion
P. Miley	Agri.	Hampton
W. F. Odom	Agri. & Chem.	Barnwell
W. C. Pitts	Civil	Laurens
J. C. Pridmore	Agri.	Cherokee
M. Quattlebaum	Civil	Horry
J. C. Reid	Mech. Elec.	Spartanburg
T. B. Reeves	Agri.	Laurens
H. L. Rivers	Civil	Greenwood
H. K. Sanders	Agri. & Ani. Ind.	Chester
W. J. Shealey	Agri. & Ani. Ind.	Newberry
E. H. Shuler	Mech. Elec.	Aiken
F. W. Smith	Mech. Elec.	Marion
W. C. Spratt	Mech. Elec.	Chester
J. A. Teague	Text.	Laurens
D. W. Watkins	Agri. & Ani. Ind.	Anderson
A. C. Whittle	Agri. & Ani. Ind.	Saluda
J. H. Wilson	Mech. Elec.	Chester
E. H. Wood	Agri.	Cherokee
C. M. Wootan	Mech. Elec.	Chester
B. E. Wolff	Agri. & Chem.	Laurens

Junior Class

NAME.	COURSE.	COUNTY.
W. Allen	Agri.	Spartanburg
W. M. Albergotti	Mech. Elec.	Orangeburg
F. R. Baker	Civil	Charleston
P. A. Baxley	Agri. & Ani. Ind.	Barnwell
W. A. Barnette	Agri. & Ani. Ind.	York
W. D. Barnett	Text.	Oconee
M. W. Beach	Mech. Elec.	Colleton
A. J. Becker	Agri.	Spartanburg
H. F. Bethea	Agri.	Marion
L. C. Boone	Civil	Orangeburg
W. C. Bolt	Agri. & Ani. Ind.	Laurens
E. D. Boykin	Agri.	Kershaw
E. M. Boykin	Text.	Kershaw
D. C. Britt	Mech. Elec.	Abbeville

NAME	COURSE	COUNTY
J. M. Buckner	Agri.	Barnwell
J. H. Bull	Civil	Sumter
G. A. Burton	Civil	Newberry
N. E. Byrd	Civil	Orangeburg
J. N. Carothers	Agri.	York
D. B. Clayton	Mech. Elec.	Fairfield
H. R. Clinkscales	Agri.	Fairfield
W. C. Crum	Text.	Orangeburg
K. Easterling	Mech. Elec.	Marlboro
S. E. Evans	Agri. & Ani. Ind.	Clarendon
G. T. Floyd	Civil	Williamsburg
T. Fulmer	Mech. Elec.	Saluda
G. C. Furtick	Mech. Elec.	Lexington
F. L. Gandy	Agri.	Darlington
J. J. Gantt	Civil	Charleston
A. Grier	Mech. Elec.	Sumter
F. B. Greene	Mech. & Elec.	Richland
E. H. Hanna	Agri.	Hampton
E. C. Haskell	Mech.	Abbeville
R. P. Henderson	Agri. & Ani. Ind.	Greenwood
V. B. Higgins	Civil	Pickens
J. L. Hill	Civil	Abbeville
W. M. Hodge	Agri.	Clarendon
O. A. Hydrick	Civil	Orangeburg
C. F. Inman	Agri.	Cherokee
H. S. Johnson	Agri. & Ani. Ind.	Florence
S. O. Kelley	Mech.	Americus, Ga.
J. E. Kirby	Civil	Spartanburg
E. S. Kohn	Mech.	Newberry
L. L. LaRoche	Chem. & Geol.	Charleston
P. E. Lee	Mech. Elec.	Spartanburg
F. O. McCown	Mech.	Anderson
A. McDavid	Civil	Abbeville
A. A. McKeown	Agri. & Ani. Ind.	Chester
C. McLaurin	Agri.	Sumter
E. C. Martin	Agri.	Pickens
W. J. Marshall	Agri. & Ani. Ind.	Greenwood
C. F. Middleton	Mech. Elec.	Charleston
J. D. Murray	Text.	Colleton
R. E. Nickles	Agri.	Abbeville

NAME	COURSE.	COUNTY.
S. O. Pegues	Agri.	Marlboro
C. H. Pennell	Agri.	Abbeville
H. D. Plenge	Mech. Elec.	Charleston
E. H. Pinckney	Agri.	Charleston
J. S. Pyatt, Jr.	Agri.	Georgetown
H. L. Reaves	Agri.	Marion
J. M. Ridgill	Agri.	Clarendon
C. M. Robbs	Civil	Cherokee
C. P. Roberts	Civil	Greenwood
W. A. Robinson	Civil	Pickens
L. D. Rogers	Agri.	Darlington
G. D. Ryan	Mech. Elec.	Sumter
G. L. Salley, Jr.	Mech. Elec.	Orangeburg
T. R. Salley	Mech. Elec.	Orangeburg
W. E. Seabrook	Mech. Elec.	Charleston
J. J. D. Shuler	Agri.	Lexington
K. B. Shuler	Civil	Lexington
R. M. Simpson	Agri.	Chester
M. D. Sims	Mech. Elec.	York
J. T. Stephenson	Mech. Elec.	Lancaster
S. B. Sullivan	Mech. Elec.	Anderson
L. W. Summers	Agri. & Ani. Ind.	Orangeburg
E. L. Sumner	Chem. & Geol.	Darlington
F. G. Tarbox	Agri.	Georgetown
E. J. Thornhill	Agri. & Ani. Ind.	Dorchester
C. P. Townsend	Mech. Elec.	Marlboro
C. H. Trott	Civil	Charleston
H. C. Twiggs	Civil	Spartanburg
W. S. Walker	Agri. & Ani. Ind.	Barnwell
V. L. Warner	Agri.	Greenwood
L. D. Webb	Mech. Elec.	Anderson
W. P. White	Mech. Elec.	Laurens

Sophomore Class.

F. Adams	Agri.	Lancaster
T. L. Alford	Text.	Marion
L. B. Altman	Agri.	Horry
A. B. Allen	Agri.	Marion
F. H. All	Mech.	Barnwell
H. W. Anderson	Mech.	Colleton

NAME	COURSE	COUNTY
M. W. Arthur	Mech. Elec.	Union
H. R. Bailey	Mech.	Aiken
D. C. Beaty	Agri.	Union
H. C. Beaty	Text.	Georgetown
A. S. Bedell	Agri.	Greenville
J. E. C. Bischoff	Mech.	Charleston
P. L. Bissell	Mech.	Charleston
L. D. Boone	Agri.	Orangeburg
H. W. Brinson	Mech.	Greenwood
S. L. Britt	Agri.	Abbeville
J. E. Brown	Mech. Elec.	Anderson
O. B. Brodie	Mech.	Oconee
J. H. Bull	Agri.	Greenville
D. B. Campbell	Agri.	Beaufort
W. E. Cannon	Mech.	Spartanburg
P. W. Cantwell	Chem. & Geol.	Orangeburg
G. T. Cassels	Agri.	Fairfield
A. D. Chapman	Mech.	Pickens
O. R. Cohen	Mech.	Charleston
I. N. Colclough	Agri.	Clarendon
P. M. Coleman	Mech.	Fairfield
W. R. Connelly	Text.	Chester
H. P. Cooper	Agri.	Fairfield
J. T. Crawford	Text.	Laurens
E. I. Davis	Mech.	Greenwood
H. S. Davis	Mech.	Charleston
L. St. J. David	Mech.	Greenville
B. H. Deason	Agri.	Abbeville
J. A. Dew	Agri.	Greenville
O. O. Dukes	Agri.	Dorchester
H. C. Eagerton	Agri.	Berkeley
M. H. Epps	Text.	Florence
C. D. Evans	Civil	Abbeville
G. C. Fant	Mech.	Anderson
C. B. Farmer	Mech.	Barnwell
J. R. Fizer	Text.	Dorchester
B. P. Folk	Agri.	Newberry
W. W. Foster	Mech.	Spartanburg
R. W. Freeman	Agri.	Darlington
H. Fulmer	Agri.	Saluda

NAME	COURSE.	COUNTY.
G. D. Garner	Mech.	Griffin, Ga
W. C. Garrett	Text.	Pickens
B. W. Gettys	Agri.	Kershaw
J. L. Gilmore	Agri.	Berkeley
C. R. Gillam	Mech.	Bamberg
E. V. Gilmer	Mech.	Greenville
W. N. Ginn	Mech.	Hampton
W. S. Goodman	Civil	Oconee
J. A. Goodwin	Agri.	Greenville
O. H. Graham	Agri.	Williamsburg
I. H. Grimball	Mech.	Charleston
W. H. Hanckel	Mech.	Charleston
W. M. Haynsworth	Agri.	Florence
B. B. Harris	Agri.	Anderson
J. W. Harrison	Mech.	Spartanburg
L. C. Harrison	Mech.	Oconee
D. T. Hardin	Mech.	Abbeville
L. H. Hardin	Mech.	Cherokee
L. C. Haskell	Agri.	Abbeville
N. O. Head	Mech.	Aiken
J. W. Henagan	Agri.	Calhoun
W. N. Henderson	Agri.	Fairfield
W. F. Hodge	Agri.	Clarendon
J. Hough	Agri.	Kershaw
H. H. Jacobs	Mech.	Richland
Joseph E. Jenkins	Agri.	Berkeley
Jno. E. Jenkins	Agri.	Richland
E. S. Jenkins	Agri.	Charleston
F. H. Jeter	Agri.	Union
W. S. Jones	Agri.	Sumter
J. B. Keith	Agri.	Florence
C. E. Ketchin	Agri.	Chester
B. T. Knight	Text.	Chesterfield
J. S. Knox	Agri.	Oconee
G. E. Lachicotte	Agri. & Ani. Ind.	Georgetown
B. F. Lawrence	Mech. Elec.	York
J. K. Lawton	Mech.	Hampton
W. M. Lenoir	Mech.	Sumter
L. S. Lindler	Agri.	Lexington
C. F. Lokey	Text.	Gainesville, Ga

NAME	COURSE	COUNTY
R. W. Lowery	Mech.	Oconee
F. W. Lykes	Text.	Richland
C. S. Lykes	Agri.	Richland
E. A. McCreary	Mech.	Aiken
R. J. McIntosh	Mech.	Richland
L. C. McLure	Mech.	Chester
O. P. McCord	Mech. Elec.	Greenwood
G. L. McCord	Mech.	Abbeville
M. A. McCown	Mech.	Anderson
T. S. Marshall	Mech.	Greenwood
G. L. Marshall	Agri.	Greenwood
H. H. Martin	Text.	Anderson
J. M. Martin	Mech.	Horry
W. W. Mickle	Agri.	Kershaw
S. L. Miller	Agri.	Chester
J. C. Milling	Mech. Elec.	Greenwood
O. A. Morrah	Text.	Abbeville
R. Morrison	Mech.	Chester
W. W. Newman	Mech.	Chesterfield
W. Osborne	Mech.	Spartanburg
F. F. Parker	Mech.	Spartanburg
J. P. Parks	Agri.	Laurens
S. M. Pennell	Agri.	Abbeville
W. G. Perry, Jr.	Mech.	Greenville
F. M. Rast, Jr.	Agri.	Orangeburg
J. A. Riley.	Text.	Bamberg
H. F. Rivers	Mech.	Charleston
M. McK. Roddey	Mech.	Chester
F. E. Rogers	Mech. Elec.	Darlington
F. L. Ross	Agri.	Cherokee
A. M. Salley	Agri.	Orangeburg
T. B. Sandifer	Mech.	York
O. T. Sanders	Agri.	Sumter
F. E. Schroder	Mech.	Charleston
J. F. Sherard	Mech.	Greenwood
C. M. Simpson	Mech.	Newberry
L. D. Simpson	Mech.	Newberry
E. N. Sitton	Text.	Anderson
C. M. Sondley	Agri.	Abbeville
R. G. Stevens	Text.	Greenville

NAME.	COURSE.	COUNTY.
J. P. Stickley	Agri.	Beaufort
L. S. Stokes	Agri.	Orangeburg
W. E. Stokes	Mech.	Bamberg
J. L. Team	Agri.	Kershaw
L. P. Tobin	Mech.	Barnwell
S. G. Venning	Mech.	Charleston
R. H. Walker	Mech.	Barnwell
W. M. Wall	Agri.	Marion
J. J. Wheeler	Mech.	Saluda
W. M. Wiggins	Agri.	Marion
T. D. Williams	Mech.	Matthews, N. C.
J. O. Wingard	Text.	Lexington
R. S. Wolfe	Mech.	Orangeburg
H. M. Woodward	Mech.	Barnwell
L. T. Wyndham	Civil	Berkeley

Freshman Class.

S. S. Abell	Mech. & Elec.	Chester
H. A. Adams	Text.	Edgefield
T. C. Adams	Text.	York
R. U. Altman	Chem. & Geol.	Marion
J. N. Ancrum	Agri.	Kershaw
T. Ancrum	Agri.	Kershaw
G. M. Anderson	Civil	Abbeville
G. H. Anderson	Text.	Chester
J. A. Aull	Civil	Anderson
J. D. Auld	Agri.	Charleston
B. R. Bacott	Agri.	Charleston
J. A. Banks	Mech.	Calhoun
C. D. Barksdale	Mech.	Greenwood
J. A. Bane	Agri.	Lexington
J. A. Bates	Agri.	Calhoun
H. W. Beall	Mech & Elec.	Sumter
W. S. Becker	Mech. & Elec.	Spartanburg
H. S. Beeks	Civil	Laurens
T. E. Bell	Agri.	Lee
A. H. Bentley	Mech.	Greenville
M. D. Berry	Agri.	Greenville
J. W. Blackwell	Mech. & Elec.	Darlington
J. Z. Blake	Mech. & Elec.	Greenwood

NAME.	COURSE.	COUNTY.
O. M. Blanton	Mech. & Elec.	Horry
E. E. Blount	Mech.	Barnwell
C. C. Boroughs	Agri.	Pickens
A. C. Bolt	Agri.	Laurens
S. E. Boozer	Mech.	Charleston
C. C. Boswell	Agri.	Greenville
W. McG. Bowen	Civil	Pickens
J. F. Boyd	Mech. & Elec.	Spartanburg
W. B. Britt	Agri.	Abbeville
J. E. Brodie	Agri.	Aiken
A. J. Brown	Mech. & Elec.	Pickens
S. M. Brown	Mech.	Anderson
G. W. Byars	Agri.	Cherokee
C. E. Byrd	Mech.	Darlington
W. M. Byrd	Mech.	Darlington
J. C. Caldwell	Mech.	Chester
J. W. Calvert	Agri.	Abbeville
J. T. Campbell	Mech.	Charleston
J. C. Cason	Agri.	Abbeville
J. T. Cochran	Mech.	Calhoun
W. H. Collier	Mech.	Orangeburg
S. M. Connor	Agri.	Colleton
M. L. Cooper	Agri.	Fairfield
L. W. Corbett	Mech.	Lee
H. S. Covington	Agri.	Marlboro
J. F. D. Covington	Mech.	Marlboro
J. R. Crawford	Mech.	Laurens
W. S. Crawford	Text.	Laurens
W. D. Craig	Text.	Fairfield
R. S. Creech	Agri.	Barnwell
H. W. Cromer	Agri.	Orangeburg
J. C. Crouch	Text.	Saluda
J. J. Cudd	Agri.	Spartanburg
L. W. Davis	Agri.	Orangeburg
W. C. Davis	Civil	Oconee
J. B. Davis	Civil	Pickens
W. P. Dean, Jr.	Mech.	Greenwood
E. C. DeBruhl	Civil	Abbeville
F. A. Desportes	Agri.	Fairfield
J. C. Dewitt	Agri.	Darlington

NAME.	COURSE.	COUNTY.
C. H. Dixon	Agri.	Florence
A. J. Dozier	Mech.	Richland
J. M. Dreher	Civil	Lexington
E. C. DuBose	Agri.	Lee
W. T. Dye	Civil	Cherokee
O. P. Earl	Mech.	Spartanburg
J. A. Edwards	Mech.	Oconee
J. C. Edwards	Mech.	Oconee
M. B. Elkins	Mech.	Hampton
R. L. Ellis	Agri.	Charleston
C. P. Ervin	Agri.	Spartanburg
A. B. Evans	Mech.	Charleston
J. F. Ezell	Agri.	Spartanburg
W. D. Ezell	Agri.	Spartanburg
C. V. Fairy	Mech.	Orangeburg
R. M. Fairey	Agri.	Orangeburg
A. P. Fant	Mech.	Anderson
C. B. Farris	Agri.	York
J. B. Ferguson	Mech.	Chester
J. C. Fitzsimmons	Mech.	Charleston
G. W. Fleming, Jr	Mech.	Florence
C. S. Folk, Jr.	Agri.	Bamberg
J. B. Free	Agri.	Marion
H. A. Freeman	Civil	Laurens
J. H. Gage	Mech.	Union
R. W. Galphin	Agri.	Orangeburg
J. W. Gantt	Agri.	Anderson
J. W. Gary	Mech.	Newberry
H. L. Gandy	Mech.	Darlington
A. E. Gilmore	Mech.	Union
L. C. Gilstrap	Agri.	Pickens
A. K. Goldfinch	Text.	Horry
L. J. Goodman	Mech.	Calhoun
W. R. Gray	Agri.	Laurens
W. H. Green	Chem. & Geol.	Barnwell
C. M. Hall	Agri.	Anderson
E. E. Hall	Agri.	Lancaster
P. S. Hall	Agri.	Charleston
E. E. Hamlin	Mech.	Anderson
H. G. Hamlin	Civil	Anderson

NAME.	COURSE.	COUNTY.
M. L. Hamer	Mech.	Marlboro
J. E. Hanahan	Agri.	Charleston
G. L. Hardy	Mech.	Edgefield
E. S. Harrell	Mech.	Florence
J. G. Harris	Agri.	Laurens
T. Harris	Civil	York
J. E. Hartley	Mech.	Lexington
H. H. Harvey	Agri.	Berkeley
H. W. Harvey	Agri.	Berkeley
J. H. Hayden	Agri.	Orangeburg
C. J. Hayden	Agri.	Orangeburg
W. H. Hayes	Agri.	Spartanburg
M. L. Haynsworth	Mech.	Darlington
G. J. Hearsey	Agri.	Marlboro
M. Heldman	Mech.	Spartanburg
B. L. Hendricks	Agri.	Pickens
W. W. Herbert	Agri.	Newberry
J. D. Heriot	Agri.	Lee
H. A. Heriot	Mech.	Lee
H. D. G. Heriot	Agri.	Lee
J. T. Hiers	Agri.	Colleton
D. B. Hill	Mech.	Bamberg
P. W. Hoke	Agri.	York
T. E. Horton	Mech.	Anderson
J. G. Hudson	Agri.	Fairfield
H. M. Hutson	Agri.	Pickens
C. T. Hutto	Agri.	Orangeburg
J. H. Hydrick	Mech.	Orangeburg
H. A. Inabinet	Civil	Orangeburg
H. G. Irby	Agri.	Laurens
O'Neal Jacobs	Agri.	Newberry
T. A. Jeffords	Agri.	Orangeburg
L. S. Jeffords	Agri.	Florence
H. C. Jennings	Agri.	Orangeburg
U. Jennings	Agri.	Greenwood
R. M. Jetter	Agri.	Richland
C. F. Johnson	Agri.	Spartanburg
T. W. Johnson	Mech.	Florence
J. B. Jones, Jr.	Mech.	Lancaster
L. M. Jordan	Mech.	Colleton

NAME.	COURSE.	COUNTY.
E. P. Josey	Agri.	Darlington
H. O. Kaigler	Civil	Calhoun
L. M. Kay	Mech.	Pickens
H. S. Kennedy	Mech.	Greenwood
J. P. Knight	Civil	Greenville
W. R. LaMotte	Mech.	Darlington
M. A. Laney	Agri.	Chesterfield
D. Latimer	Agri.	Abbeville
J. G. Lawton	Agri.	Hampton
J. T. Lazar	Mech.	Barnwell
R. E. Lee	Mech.	Darlington
S. I. Lenoir	Agri.	Sumter
H. O. Lindler	Agri.	Lexington
J. R. W. Lindler	Mech.	Lexington
E. G. Littlejohn	Mech.	Union
J. P. Major	Agri.	Anderson
C. V. May	Agri.	Colleton
E. D. Mays	Agri.	Greenwood
E. L. McCants	Mech.	Anderson
E. C. McCown	Agri. & Chem.	Anderson
F. A. McCraw	Civil	Cherokee
O. F. McCrary	Agri.	Greenville
R. D. McFaddin	Mech.	Clarendon
E. A. McKeown	Mech.	Chester
J. H. Mappus	Agri.	Charleston
F. M. Mellett	Agri.	Sumter
J. A. Merrett	Text.	Edgefield
S. A. Miller	Mech. & Elec.	Lexington
J. E. M. Mitchell	Mech.	Charleston
D. P. Moore	Civil	Sumter
W. M. Morrall	Mech.	Beaufort
W. D. Mott	Agri.	Charleston
J. Nance	Mech.	Newberry
G. A. Neuffer, Jr.	Mech.	Abbeville
W. S. Nicholson	Text.	Union
T. W. Norment	Mech.	Darlington
J. D. O'Bryan	Mech.	Williamsburg
R. A. Opt	Text.	Anderson
B. F. Owens	Agri.	Barnwell
H. F. Padget	Agri.	Saluda

NAME.	COURSE.	COUNTY.
L. R. Page	Agri.	Spartanburg
A. B. Parker	Mech.	Sumter
T. M. Parker	Mech.	York
L. B. Parris	Agri.	Spartanburg
F. B. Pennell	Agri.	Anderson
B. F. Pennell	Agri.	Abbeville
T. P. Perry	Text.	Greenville
W. C. Petrie	Mech.	Spartanburg
H. B. Pitts	Agri.	Sumter
W. Prior	Agri.	Anderson
W. H. Privette	Agri.	Darlington
H. T. Prosser	Agri.	Williamsburg
P. F. Quackenbush	Agri.	Dorchester
P. C. Quattlebaum	Mech.	Horry
A. P. Ransom	Mech.	Anderson
W. E. Redden	Mech.	Anderson
T. C. Redfern	Agri.	Oconee
F. L. Reese	Agri.	Abbeville
D. H. Reeves	Agri.	Fairfield
W. T. Reeves	Mech.	Fairfield
T. R. Reid	Civil	Spartanburg
W. H. Rentz	Mech.	Hampton
J. R. Renwick	Agri.	Union
T. R. Risher, Jr.	Agri.	Colleton
F. W. Risher	Agri.	Colleton
W. H. Rochester	Civil	Greenville
E. S. Rogers	Agri.	Cherokee
W. S. Rogers	Civil	Richland
N. K. Rowell	Agri.	Marion
R. E. Sadler	Mech.	York
W. H. Saunders	Agri.	Sumter
M. F. Sanders, Jr.	Mech.	Greenwood
J. L. Seal	Agri. & Ani. Ind.	Greenwood
A. C. Shell	Mech.	Laurens
H. D. Shuler	Agri.	Berkeley
J. A. Simpson	Mech.	Anderson
P. H. E. Sloan, Jr.	Mech.	Anderson
A. G. Small	Agri.	Horry
E. A. Sompayroc	Mech.	Darlington
H. L. Spencer	Agri.	Chesterfield

NAME.	COURSE.	COUNTY
C. H. Stanton	Agri.	Marlboro
W. J. Stevenson	Agri.	Fairfield
F. E. Stokes	Agri.	Laurens
H. H. Stokes	Agri.	Barnwell
C. E. Stokes	Agri.	Laurens
J. N. Stribling	Mech.	Oconee
R. A. Stribling	Mech.	Oconee
J. M. Sturdyvin	Civil	Greenville
N. S. Thayer	Mech.	Charleston
L. R. Therrell	Agri.	Lancaster
H. M. Thomas	Agri.	Oconee
E. W. Tison	Mech.	Hampton
F. W. Toole	Civil	Aiken
D. Tompkins	Text.	York
B. J. Truesdale	Mech.	Kershaw
S. Y. Tupper	Agri.	Charleston
R. F. Ulmer	Agri.	Hampton
H. S. Wakefield	Mech.	Abbeville
J. B. Wakefield	Mech.	Abbeville
W. J. Wannamaker	Agri.	Orangeburg
B. A. Weinberg	Agri.	Sumter
J. W. Welborn	Agri.	Laurens
J. H. S. Wessinger	Agri.	Lexington
F. P. Wickman	Civil	Colleton
W. E. Wickliffe	Agri.	Greenwood
L. M. Williford	Agri.	Anderson
F. A. Williford	Mech.	Anderson
J. A. Willoughby	Mech.	Florence
T. B. Wilson	Mech.	Aiken
J. M. Workman	Agri.	Sumter
W. B. Wright	Mech.	Fairfield
L. F. Yates	Text.	Darlington
G. H. Zerbst	Agri.	Charleston

Preparatory Class

A. N. Adams	York
J. B. Attaway	Saluda
E. F. Bellinger	Colleton
W. D. Bethea	Marion

NAME.	COUNTY.
G. D. Blackwell	Edgefield
R. J. T. Blease	Saluda
J. P. Bolt	Anderson
J. R. Boulware	Fairfield
L. L. Boylston	Aiken
C. C. Boylston	Aiken
E. A. Boylston	Colleton
M. L. Brockington	Williamsburg
E. D. Buckley	Charleston
M. Burnette	Spartanburg
L. S. Burton	Newberry
O. H. Buzhardt	Saluda
J. C. Caldwell	Chester
H. T. Carson	Orangeburg
H. S. Clarke	Florence
R. Clinkscales	Abbeville
D. H. Covington	Marlboro
R. D. Cothran	Greenville
D. Davis	Oconee
W. R. Davis	Oconee
O. M. Doyle	Pickens
R. H. DeWitt	Darlington
R. E. Dupont	Clarendon
R. E. Edwards	Calhoun
W. C. Farmer	Barnwell
C. L. Farris	York
W. H. Ferguson	Chester
G. M. Ford	Darlington
B. Funderburk	Lancaster
A. P. Gaillard	Sumter
A. P. Gandy	Darlington
S. A. Gandy	Darlington
A. G. Gilliam	Abbeville
E. W. Goodwin	Colleton
A. E. Hamlin	Anderson
G. W. Hairston	Newberry
J. A. Harper	Abbeville
G. P. Hoffman	Fairfield
E. L. Holliday	Anderson
J. W. Holliday	Anderson

NAME.	COUNTY.
J. H. Hollingsworth	Edgefield
C. S. Hutchinson	York
C. R. Jones	Colleton
J. B. Kirby	Cherokee
T. A. Kirby	Cherokee
W. F. Lachicotte	Georgetown
B. T. Lanham	Edgefield
C. T. Latimer	Abbeville
M. S. Lawton	Barnwell
A. P. Lewis	Oconee
J. R. Lomax	Abbeville
L. P. McCarley	Oconee
R. E. McElveen	Sumter
C. R. McLeod	Marion
H. G. Miley	Hampton
T. S. Moore	Oconee
S. P. Morrah	Abbeville
T. D. Murph	Spartanburg
J. H. Opt	Anderson
B. F. Parks	Edgefield
C. S. Patrick	Cherokee
M. K. Pegues	Marlboro
M. O. Powell	Florence
J. C. Rich	Colleton
M. M. Reams	Sumter
C. T. Reed	Orangeburg
A. O. Sanders	Barnwell
A. E. Schilletter	Oconee
W. A. Schilletter	Oconee
H. Scott	Clarendon
B. A. Shuler	Orangeburg
A. E. Skinner	Beaufort
J. S. Smith	Williamsburg
W. Smith	Pickens
E. P. Steele	York
E. E. Stevens	Berkeley
Hoyt Thomas	Oconee
S. M. Webb	Saluda
R. H. White	Union
P. Williford	Anderson

NAME.	COUNTY.
H. F. Wilson	Georgia
R. H. Wingo	Spartanburg
J. M. Wooten	Chester
C. Worley	Horry
V. B. Wright	Chester

Special Students

F. W. Chapman,	Mech.	Newberry
R. A. Fetzer	Mech.	North Carolina
A. Jones Jr.	Mech.	Richland
L. E. May	Chemistry	Charleston
E. R. Taylor	Dairying	Richland

Two-Year Course Textile Students

G. H. Anderson, first year	Chester
C. S. Cunningham, first year	Laurens
D. L. Boulware, second year	Laurens
W. S. Jones, first year	Sumter
L. C. Langston, second year	Laurens
R. P. Sweeney, first year	Greenwood
L. S. Sitton, second year	Anderson
J. W. Waldrop, second year	Newberry
J. O. Wingard, first year	Lexington

Students in Cotton Grading

W. L. Bruce	Marion
J. P. Guntharp	Oconee

Irregular Students

R. L. Alston	Agri.	Oconee
J. C. Reid	Mech.	Spartanburg

SUMMARIES**By Classes**

Seniors	57
Juniors	86
Sophomores	141
Freshmen	257
Preparatory	89
Special	5
Short Course Textile	9
Irregular	2
Students in Cotton Grading	2
Total	648

By States

South Carolina	643
Georgia	3
North Carolina	2
Total	648

By Counties in South Carolina

Abbeville	35
Aiken	10
Anderson	36
Bamberg	6
Barnwell	18
Beaufort	4
Berkeley	8
Calhoun	7
Charleston	39
Cherokee	15
Chester	20
Chesterfield	5
Clarendon	8

Colleton	16
Darlington	21
Dorchester	4
Edgefield	8
Fairfield	16
Florence	12
Georgetown	6
Greenville	19
Greenwood	21
Hampton	10
Horry	7
Kershaw	9
Lancaster	6
Laurens	24
Lee	7
Lexington	14
Marion	18
Marlboro	12
Newberry	17
Oconee	25
Orangeburg	32
Pickens	16
Richland	13
Saluda	10
Spartanburg	30
Sumter	22
Union	11
Williamsburg	8
York	18
Total, South Carolina	643

INDEX

	PAGES
Academic department	120
Admission of students	24
Agricultural buildings	63
Agricultural courses	30 35
Agricultural department	91
Agricultural scholarships	56
Agricultural equipment	69
Agricultural instruction	91
Analyses, information, etc.	147
Animal industry course	34
Animal industry and dairying equipment	72
Animal industry and dairy instruction	96
Athletics	137
Bacteriology and botany equipment	72
Bacteriology instruction	95
Barracks	61
Band	17
Battalion organization	15, 16
Board of Health	12
Board of Trustees	4
Board of Visitors	6
Botany and bacteriology equipment	72
Botany and Forestry instruction	98
Buildings and grounds	61 68
Bulletins, Experiment Station	147
Bulletins, Popular Science	148
Cadet Band	17
Cadet Exchange	137
Calhoun mansion	67
Calhoun relics	86
Care of the sick	134
Chapel services	132
Chemical Buildings	66
Chemical department	110
Chemistry and metallurgy equipment	79
Chemistry and metallurgy instruction	110
Civil engineering course	40 41
Civil engineering equipment	85
Civil engineering instruction	102

Clemson pictures	
College officers	
Committees of the Board	
Committees of the Faculty	
Courses of study	
Course I. Agriculture	
Course II. Agriculture and chemis	
Course III. Agriculture and animal	
Course IV. Chemistry and geology	
Course V. Mechanical and electrical eng	
Course VI. Civil engineering	
Course VII. Textile industry	
Special and irregular courses	
Dairying and animal industry equipment	
Dairying and animal industry instruction ..	
Degrees, medals and honors	
Departments of the College	
Agricultural department	
Engineering department	
Chemical department	
Textile department	
Academic department	
Military department	
Preparatory department	
Descriptions of courses of instruction	
Donations to the College	
Drawing and designing equipment	
Drawing and designing instruction	
Electrical engineering course	
Electrical engineering equipment	
Electrical engineering instruction	
English	
Entomology and Zoology equipment	
Entomology and Zoology instruction	
Entrance examinations	
Entrance requirements	
Equipments and practical instruction	
Exchange	
Expenses and fees	
Experiment Station and inspection work	

	PAGES
Experiment Station staff	13
Faculty	7 10
Fees and expenses	54
Field day	139
Forestry	98
Forge and foundry equipment	77
Forge and foundry instruction	107
Free tuition	55
General information	128 146
General regulations	131
Geology and chemistry course	36 37
Geology and mineralogy equipment	69
Geology and mineralogy instruction	92
Government of the College	129
Grades, reports and promotions	50
Graduates, 1908, list of	149
Grounds and buildings	61
Heat, light and water	67
Historical sketch of the College	21 24
History and political economy	121
Horticulture equipment	64 70
Horticulture instruction	94
Hotel and residences	67
Inspection officers	13
Inspection and Experiment Station work	147
Irregular courses	49
Laboratory and shop equipment	69 86
Leaves of absence	130
Lecture course	137
Library	86
List of students, 1908-1909	151
Literary societies	135
Location of the College	21
Machine shop equipment	77
Machine shop instruction	108
Main building	61
Mathematics	122
Mechanical and electrical buildings	66
Mechanical and electrical department	100
Mechanical and electrical engineering course	39
Mechanical and electrical equipment	73

Mechanical engineering equipment.....	
Mechanical engineering instruction	
Military department.....	
Military science and tactics.....	
Mineralogy and geology equipment.....	69
Mineralogy and geology instruction.....	92
Ministers for session 1908-1909.....	14
Officers of the College	12
Oratorical Association, State.....	136
Organization and government of the College.....	137
Physics equipment.....	76
Physics instruction	104
Political economy and history.....	121
Popular science bulletins	148
Preparatory course	49
Prescribed courses of study.....	28 43
Publications by students	136
Regulations, general.....	131
Regulations governing athletics.....	138
Religious exercises	132
Reports, grades and promotions.....	50
Reports to parents.....	3 50
Requirements for admission... ..	22
Scholarships, agricultural.....	56
Science Club	104
Shop and laboratory equipment.....	69 86
Societies, literary.....	135
Soil physics equipment.....	70
Soil physics instruction.....	92
Special courses.....	44
State Chemist and inspection officers	13
State Oratorical Association.....	136
Student labor.....	135
Summaries by classes, states and counties.....	168
Sunday school.....	133
Textile building.....	61
Textile industry course.....	42
Textile industry equipment	80
Textile industry instruction... ..	112
Tuition, fees, etc	54
Veterinary science equipment	71
Veterinary science instruction.....	94
Woodwork equipment	73
Woodwork instruction.....	104
Young Men's Christian Association.....	118
Zoology and entomology equipment.....	71
Zoology and entomology instruction.....	98

CATALOGUE

OF

**The Clemson
Agricultural College
Of South Carolina**

STATE AGRICULTURAL AND MECHANICAL COLLEGE

TELEGRAPH AND POST OFFICES: CLEMSON COLLEGE

EXPRESS AND FREIGHT OFFICES: CALHOUN

RECORD OF SEVENTEENTH YEAR

1909-1910

AND

ANNOUNCEMENTS FOR 1910-1911

PRINTED AT CLEMSON COLLEGE PRINTERY
CLEMSON COLLEGE, S. C., 1910.

1910

JULY							SEPTEMBER							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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31																				

AUGUST							OCTOBER							DECEMBER						
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							30	31												

1911

[illegible]

COLLEGE CALENDAR

Session 1910-1911

- 1910.
- Sept. 14. Opening of the 18th session; exercises begin at 8:40 A. M.
- Sept. 15. Examinations for admission and for removal of conditions.
- Nov. 24. Thanksgiving: a holiday.
- Dec. 23. First day of Christmas recess.
- 1911.
- Jan. 3. Beginning of the Second Term, 8:40 a. m.
- Jan. 19. Lee's Birthday; annual public exercises of the Columbian Literary Society in the evening.
- Feb. 22. Washington's Birthday; a holiday.
Annual public exercises of the Palmetto Literary Society in the evening.
- Feb. 28. Stated meeting of the Board of Trustees.
- Mar. 18. Calhoun's Birthday: a holiday.
- Mar. 24. Annual public exercises of the Calhoun Literary Society in the evening.
- 1911.
- Mar. 27. Beginning of the Third Term, 8:40 a. m.
- May 1. A holiday.
Annual track and field athletic contests.
- June 11. Beginning of commencement exercises; baccalaureate sermon.
- June 12. Address of alumni orator.
Contest of literary society representatives.
Military exercises and graduation parade.
- June 13. Commencement Day; address to the graduating class.
Graduating exercises; delivery of diplomas.
- July 11. Stated meeting of Board of Trustees.

Reports to Parents

Reports of class standing and discipline will be sent to parents for periods ending on the following dates:

October 28, and December 16,* 1910; February 10, March 17,* April 28, and June 2,* 1911.

Dates marked with an asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

Quarterly Dues

Payable September 14, November 16, 1910; January 18, March 22, 1911.

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Entomological Committee

Messrs. Evans, Manning, Richards.

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*The President of the Board, Hon. Alan Johnstone, is *ex officio* a member of all committees.

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Third District—Hon. W. N. Graydon, Abbeville, S. C.

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Captain 10th Infantry, U. S. Army
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Assistant to Secretary Board of Fertilizer Control.

MISS ETTA M. SADLER
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JOHN McMILLAN GASQUE
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JOSEPH JAMES HINEKER
Sergeant U. S. Army (retired)
Quartermaster Sergeant.

*Resigned January 1st, 1910.

**After January 1st, 1910.

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Professor of Geology and Mineralogy.

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Associate Professor of Veterinary Science.

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Associate Professor of Horticulture.

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Associate Professor of Botany and Forestry.

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ROBERT OLIVER FEELEY, D. V. S.

Assistant in Veterinary Science.

*The names of the Officers of Instruction are arranged in groups in each department—Professors, Associate Professors, Assistant Professors, and Instructors, in the order of their respective appointments.

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WALTER MERRITT RIGGS, B. S., E. M. E.

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SAMUEL BROADUS EARLE, A. M., M. E.

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Assistant Professor of Wood Work.

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ZACH ROBERT LEWIS.

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JAMES CORCORAN LITTLEJOHN, B. S.

Instructor in Wood Work.

*Resigned January 1st, 1910.

FRANCIS RAYMOND SWEENEY, B. S.

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Captain 10th Infantry, U. S. A., Commandant of Cadets.
Professor of Military Science and Tactics.

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Assistant Professor of English.

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The first named in each instance is chairman.

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Professors Daniel, Martin, Houston.

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Professors Le Bryan, Burgess.

Klugh, Henry

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HENRY WALTER BARRE, M. S.
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Superintendent Coast Land Experiment Station.

MISS HELEN BRADFORD
Stenographer.

BURNS GILLISON
Foreman Experiment Station Farm.

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U. S. Dept of Agriculture.
Assistant in Dairy Husbandry.

WILLIAM H. MORGAN, B. S.**
U. S. Dept of Agriculture.
Assistant in Dairy Husbandry.

*Transferred, May 1910. **Appointed May 1910.

Chemists of Fertilizer Control

M. B. HARDIN, Chief Chemist.

B. F. ROBERTSON, B. S., Assistant Chemist.

J. H. MITCHEL, M. S., Assistant Chemist.

C. V. W. CORNELL, B. S., Assistant Chemist.

L. O. WATSON, B. S., Assistant Chemist.

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PROF. M. B. HARDIN, State Chemist.

W. A. THOMAS, B. S., State Entomologist.

DR. M. RAY POWERS, State Veterinarian.

DR. R. O. FEELEY, Assistant Veterinarian.

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EpiscopalRev. L. E. Hubbard.

MethodistRev. M. B. Kelly.

PresbyterianRev. W. H. Mills.

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LutheranRev. S. B. Koan, Prosperity, S. C., Jan. 29, 1910.

A. R. P.....Rev. P. A. Pressley, Lewisville, Ga., May 8, 1910.

Baccalaureate Sermon

Rev. Geo. H. Cornelson, Jr., D. D., New Orleans, La.

Commencement Address

Pres. E. B. Craighead, LL. D., Tulane Univ., New Orleans, La.

*Appointed by the Board of Trustees under the State laws requiring them to carry on the work indicated.

REGIMENTAL ORGANIZATION

1910

Commandant of Cadets

CAPT. M. B. STOKES,
Tenth Infantry, United States Army.

Regimental Staff

S. O. Pegues.....Captain and Adjutant
W. Allen.....Captain and Quartermaster

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Joseph E. Jenkins.....Sergeant-Major
J. A. Dew.....Quartermaster Sergeant
E. N. Sitton.....Color Sergeant
L. D. Boone.....Color Sergeant

First Battalion

MAJOR L. W. SUMMERS.

L. C. Boone.....Adjutant
G. C. Furtick.....Sergeant-Major

COMPANY "A" COMPANY "B" COMPANY "C" COMPANY "D"

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LaRoche, L. L. Barnette, W. A. White, W. P. Marshall, W. J.

Lieutenants

Albergotti, W. M. Simpson, R. M. Easterling, K. McLaurin, C.
Johnson, H. S. McKeown, A. A. Kelley, S. O. Hill, J. L.

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Sergeants

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Lindler, L. S. Cooper, H. P. Garrett, W. C. Folk, B. P.
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Wakefield, J. E. Byars, G. W. Moore, M. P. Jacobs, O.
Littlejohn, E. G. Workman, J. M. Dixon, C. H. Evans, A. B.
Prosser, H. T. Adams, T. C. Bell, T. E. Jordan, L. M.
Rentz, W. H. Parker, T. M. Gray, W. R. Privett, W. H.
Bates, J. A. Cooper, M. L. Jennings, H. C. Caldwell, J. C.
Brown, S. M. Yates, L. F. Blackwell, J. W. Adams, H. A.

Second Battalion

MAJOR F. R. BAKER

W. C. CrumAdjutant
 A. M. SalleySergeant-Major

COMPANY "E" COMPANY "F" COMPANY "G" COMPANY "H"

Captains

Hydrick, O. A. Stephenson, J. T. Middleton, C. F. Barnett, W. D.

Lieutenants

Fulmer, T. Lee, P. E. Robbs, C. M. Simms, M. D.
 Henderson, R. P. Nickles, R. E. Gandy, F. L. Shuler, J. D.

First Sergeants

Altman, L. E. Jenkins, E. S. Schroeder, F. E. Henderson, W. N.

Sergeants

Rast, F. M. Jr. Goodwin, J. A. Lawton, J. K. Lachicotte, G. E.
 McCord, G. L. Britt, S. L. Walker, R. H. Harrison, L. C.
 Lykes, F. W. Gettys, B. W. Lykes, C. S. McCord, O. P.
 Gilliam, C. R. McCown, F. O. Harrison, J. W. Milling, J. C.

Corporals

Hamer, M. L. Fant, A. P. David, L. S. Gage, J. H.
 Simpson, J. A. Rowell, N. K. Williford, F. A. Kennerly, H. S.
 Redfern, T. C. Mitchell, J. E. M. Williford, L. M. Dreher, J. M.
 Lazar, J. T. Miller, S. A. Ulmer, R. F. Stribling, J. N.
 Lindler, J. R. W. Stanton, C. H. Bacot, B. R. Hutson, H. M.
 Blount, E. E. Zerbst, G. H. McCraw, F. A. Ezell, W. D.

Cadet Band

V. B. Higgins.....*First Lieutenant and Chief Musician*
 J. B. Keith.....*Drum Major*
 R. S. Wolfe.....*Sergeant*

V. B. Higgins.....*Solo Bb Cornet*
 W. D. Bryant.....*First Bb Cornet*
 T. D. Williams.....*Second Bb Cornet*
 R. S. Wolfe.....*Solo Bb Clarinet*
 H. D. Plenge.....*Baritone*
 L. D. Webb.....*First Trombone*
 L. F. Wolfe.....*Second Trombone*
 E. S. McWhorter.....*Bb Tenor*
 N. E. Byrd.....*Solo Eb Alto*
 E. H. Pinckney.....*First Eb Alto*
 J. M. Wylie.....*Second Eb Alto*
 E. A. McCreary.....*First Eb Bass*
 J. R. Lomax.....*Second Eb Bass*
 P. L. Bissell.....*Bass Drum*
 H. S. Davis.....*Snare Drum*
 W. A. Robinson.....*Cymbals*



HISTORICAL SKETCH

Thomas G. Clemson, after whom the College is named, was born in Philadelphia in April, 1807, and died at the Fort Hill home April 6, 1888.

In 1823, then scarcely 16 years old, he ran away from home, and after spending some time in England, went to Paris, where he took up arms in the revolutions of that time. His gallantry brought him recognition and the friendship of prominent men, resulting in his being given a course in the celebrated School of Mines in Paris. In this school he remained for four years, graduating with high honors.

While he was in Europe, his father died, leaving nothing to him in his will. Soon after this, he returned to America and establishing himself in Washington, practiced his profession of Mining Engineer, and accumulated a comfortable fortune. It was here that he met Miss Anna Marie, the oldest daughter of John C. Calhoun, and married her. Two children resulted from this union,—a daughter Floride, who afterwards became Mrs. Gideon Lee of New York, and a son, John Calhoun Clemson.

Mr. Clemson was a strong advocate of the political doctrine of Mr. Calhoun, and when the war broke out, fearing arrest, he and his son escaped by night in a boat, and walking to Richmond, offered their services to President Davis. Mr. Clemson was assigned to the Trans-Mississippi Nitre Mining Department, where he served until the end of the war. His son was appointed a Lieutenant and assigned to active duty.

At the end of the war, Mr. Clemson with his family came to Pendleton and resided with Mrs. John C. Calhoun until her death in 1866.

Mr. Clemson was interested as far back as this date in the establishment of an Agricultural and Industrial College. In November, 1866, a Committee was appointed, consisting of Hon. Thomas G. Clemson, Hon. R. F. Simpson and Col. W. A. Hayne, to appeal to their fellow citizens for "Aid to found an institution for educating our people in the Sciences, to the end that our Agriculture may be improved, our worn and impoverished soils be recuperated, and the great natural resources of the South be developed."

In January 1867, at a meeting of the Pendleton Farmers Society, Mr. Clemson addressed the body in "an able and most interesting and instructional discourse," and submitted in the form of a circular the appeal above referred to. The circular was written by Mr. W. H. Trescot, and closes with the words:

"Letters and contributions to be directed to the Hon. Thomas G. Clemson, LL.D., Chairman of the Committee, Pendleton, Anderson District, South Carolina."

Again in the minutes of the same Society, of which he was elected President in 1868, under date of Oct. 14, 1869, we find the following:

"The President, (Mr. Clemson), entertained the Society for half an hour on the subject of Scientific Agriculture, and the importance of Scientific Agricultural Education."

These citations indicate an early interest on the part of Mr. Clemson in the great cause to which he later devoted his estate.

Previous to the war, Mrs. John C. Calhoun had sold the Fort Hill place and negroes to her son, Col. Andrew P. Calhoun, taking in payment his bond and mortgage for \$40,000. At her death, she left a will, which resulted in her daughter, Mrs. Clemson, getting three-fourths of the value of this bond and mortgage, and her granddaughter,

the time of Mrs Calhoun's death was Mrs. Gideon Lee of York, the remaining one-fourth.

19 Shortly after Mrs. Calhoun's death, which was followed by the death of Col. A. P. Calhoun, Mrs. Thomas G. Clemson, after considerable costly litigation foreclosed the mortgage on the Fort Hill place, and at the sale of property in Walhalla in January 1872, Mr. Clemson, as Trustee for his wife and daughter, bid it in for \$15,000*, and he himself paid out of his private funds \$8000 to cover lawyer's fees, court cost, etc.

In 1871, Mr. Clemson's daughter, then Mrs. Lee, died, and seventeen days after, his only son, John Calhoun Clemson, was killed in a railroad accident at Seneca. Left childless, Mrs. Clemson willed to her husband, Thomas G. Clemson, all of her estate, "absolutely and in fee simple."**

Mr. Clemson in his will, left to his grand-daughter, Floride Isabella Lee, \$15,000 to free the property, which by the same will was donated to the State, from any claim in equity that the grand-daughter might have. This was, of course, in addition to the one-fourth of the estate which descended to Miss Lee from her mother, who acquired it under the terms of the original will of Mrs. Calhoun, and additional to the \$8,000 paid out by Mr. Clemson for fees, court costs, etc., when the entire estate was bought in.

Neither by intention, nor by donation, nor by any form of hereditary transmissiom does it anywhere appear that John C. Calhoun had anything to do with the founding of the College which bears Clemson's name.

*See Title Book Oconee County, P. 177-f.

**See Judge of Probate's Office, Oconee Co., Apartment 26, Package 287.

In 1875 Mrs. Clemson died, and on April 6, 1888, Mr. Clemson followed her to the grave, and was buried in the Episcopal church yard at Pendleton.

Mr. Clemson's will was bitterly contested by the Lee family, but was finally fully sustained by the Supreme Court. After the settlement of the will, the Trustees of the College bought from Miss Floride Isabella Lee her one-fourth of the estate which adjoined the tract given to the State by Mr. Clemson.

The following extracts are made from Mr. Clemson's will* in order to show clearly his purpose in offering his property to the State for the founding of The Clemson Agricultural College.

* * * * "Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries." * * * *

"I therefore give * * * * the aforesaid Fort Hill place where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for

*See Judge of Probate's Office, Oconee Co., Apartment 64, Package 671.

the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed, (of which the Chief Justice of South Carolina shall be the Judge,) then my executor shall execute a deed of the said property to said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation." * * * *

"The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit: R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker and J. E. Bradley; and the State if it accepts the donation shall never increase the Board of Trustees to a number greater than thirteen in all, nor shall the duties of said Board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me, shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment or election of the other six Trustees, if it accepts the donation * * * * The name of this Institution is to be "The Clemson Agricultural College of South Carolina."

In the codicil to his will, Item 12, occurs the following significant statement:

"The desire to establish such a school or College as I have provided for in my said last will and testament, has existed with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

In November 1889, the General Assembly of South Carolina passed the necessary acts authorizing the acceptance of the terms of Mr. Clemson's will, and the establishment of the College. The following extracts are taken from the State laws relating to the College:

Section 1300: "The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament * * * * wherein he devised and bequeathed the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an

Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson subject to the terms and conditions set forth in his last will and testament." * * * *

"Section 1302. The said College shall be under the management and control of a Board of Thirteen Trustees composed of the seven members nominated by said will and their successors and six members to be elected by the Legislature in Joint Assembly."

"Section 1304. That it shall require a two-thirds vote of said Board of Trustees to authorize the expenditure of any moneys appropriated to said College by the State, or to authorize the sale or transfer or re-investment of any property or moneys arising from the sale of any property under the provisions of this Act."

"Section 1319. All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer of the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South Carolina; and so much of the money so received as shall be necessary to defray the expenses of the Board in performing the duties now by this Act devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance."

It will be seen from the above extracts that the State accepted in good faith the terms of Mr. Clemson's will, a feature of which was the maintenance of the College, and recognition of the self-perpetuating life membership appointed by Mr. Clemson.

One of the early official acts of the Board was the passage of a rule that nine votes be required not only to appropriate money, as required by the State Law, but to elect any officer of the College as well. This rule was adopted that there might be no just criticism of domination by the Life Trustees.

HISTORY OF THE COLLEGE

The College was opened in July, 1893, with an enrollment of 446 students. The session extended from the

third Thursday in February to the third Thursday in December, with the idea of giving all students in Agriculture an opportunity to be instructed in the practical phases of that subject during the crop growing season.

On the night of May 24, 1894, the main College building was burned, but the regular work continued, and the building was promptly re-built.

The first graduating exercises were held in December, 1896, the graduating class numbering thirty-seven,—fifteen in the Agricultural Courses, and twenty-two in the Engineering Courses. In the fall of 1897, the session was changed to begin the second Wednesday in September and close the second Wednesday in June, as it had been found inadvisable to operate the College through the hot summer months. The exercises of the second commencement, which would normally have occurred in December 1897, were held February 6 to 9, 1898. The under-graduate classes were continued until June. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, but the closing day was afterwards changed to first Tuesday, instead of second Wednesday.

The College has been in continuous operation, and is now in its seventeenth session. During this time, the average enrollment has been 545, and the total, 9258, and the total number of graduates, (estimating the number for the present session at 77), is 679 distributed as follows:

In the Agricultural Courses 257; in the Engineering Courses, 352; in the Textile Courses, 70.

The following table gives accurate information as to attendance, number of graduates, etc:

Session	Total Enrollment.	GRADUATES BY COURSES.							Total Graduates.
		Agriculture.	Agriculture and Chemistry.	Agriculture and Animal Industry.	Mechanical and Electrical Engineering.	Civil Engineering.	Chemistry and Geology.	Textile Industry.	
1893	446	0	0	0	0	0	0	0	0
1894	635	0	0	0	0	0	0	0	0
1895	370	0	0	0	0	0	0	0	0
1896	350	15	0	0	22	0	0	0	37
'97-'98	*449	15	0	0	10	0	0	0	25
'98-'99	446	6	0	0	7	3	0	0	16
'99-'00	461	12	0	0	12	0	0	4	28
'00-'01	483	9	0	0	13	0	0	9	31
'01-'02	500	12	0	0	28	2	0	17	59
'02-'03	539	7	0	0	28	5	0	20	60
'03-'04	605	4	0	0	26	2	0	5	37
'04-'05	673	5	0	0	21	8	1	5	40
'05-'06	652	18	0	0	20	15	0	7	60
'06-'07	658	28	0	0	25	15	0	1	69
'07-'08	690	53	0	7	12	12	1	0	85
'08-'09	648	9	8	10	17	8	3	0	55
'09-'10	653	13	10	10	22	19	1	2	77
Totals	9258	206	18	27	263	89	6	70	679

By an Act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and free tuition apportioned among the counties in the same manner as the members of the Senate and House of Representatives. This number has since been increased to 167, by the creation of two counties.

*Feb. 8, to July 15, 1897 and Aug. 15, 1897, to June 8, 1898

The law provides: "That the said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said college for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural and the textile courses: Provided, That not more than one scholarship from each county shall be open to the textile course."

ASSETS

The College property consists of a continuous tract of 1296 acres located at Clemson College, S. C., and 300 acres donated by the Southern Railway near Summerville, S. C.

The College received in addition to the property donated by the Clemson will, half of the Landscript Endowment, making the following total:

Clemson Endowment	\$ 58,539
836 acres of land, (Fort Hill tract)	41,800
John C. Calhoun mansion	2,500
Paintings and personal property of T. G. Clemson...	
	\$ 102,839
Landscript Endowment (U. S.)	95,900

Total Original Assets \$ 198,739

Since the establishment of the College, the Trustees have, out of the regular income, not only operated the College, but have accumulated in land, buildings and equipment, over a million dollars, distributed in round numbers, as follows:

Additional land purchased, (460 acres)	\$ 14,000
Volumes in Library	35,000
Public Utilities	60,000
Buildings	600,000
Shop, Laboratory and Class-room Equipment	350,000

Total Added Value \$1,059,000

INCOME AND EXPENDITURES

The College derives its principal income from an inspection tax of twenty-five cents per ton on all fertilizers sold within the borders of this State.

During the political campaign of 1888 when the advocates of Agricultural Education were endeavoring to establish Clemson College, they promised that if the farmers would give to the College the Fertilizer Inspection Tax, they would undertake, not only to protect the farmers against fraudulent fertilizers by an efficient system of inspection and analysis, but would also erect and maintain an industrial College to educate, without additional taxation, the young men of South Carolina. This proposition, by vote of the people, was agreed to.

The Inspection Tax, after deducting for refunded tags, has averaged during the 19 years ending July 1st, 1909, \$87,616. For the last fiscal year, which ended July 1st, 1909, the receipts were \$177,271.74.

The following summarized financial statement for the fiscal year ending July 1st, 1909, indicates clearly the sources of income.

Tag tax on Fertilizers	\$177,271.74
Interest on Clemson Bequest	3,512 36
Interest on Landscript Fund, (U. S.)	5,754.00
Morrill & Nelson Funds, (U. S.)	17,500.00
Tuition from cadets	2,212.23
Miscellaneous, (rents, interests, etc.)	4,506.30
	\$210,756.63
Experiment Station Income, (U. S.)	28,976.11
Total Income	\$ 239,732.74

This income is expended as follows:

I. *In Public Work* required by Law, and done in the interest of the Agricultural development of the State. The moneys thus expended do not aid in operating the College as an educational institution, in the ordinary sense.

Expended for Public Work.

For Fertilizer Inspection and Analysis	\$ 22,636.24
For Agricultural and Textile Scholarships	15,166.79
For Coast Experiment Station	15,953.69
For Tick Eradication	6,583.98
For Veterinary Inspection	2,117.11
For Entomological Inspection.....	1,415.72
For Farmers' Institutes	516.26

\$ 64,389.79

S. C. Experiment Station, (U. S.) 27,868.17

Total for Public Work\$ 92,257.96

2. In operating the College strictly as an educational institution, including the cost of operating utilities not ordinarily incurred by a College located within a city.

Operating Cost of College.

For salaries of 67 teachers and officers	\$ 78,020.80
For labor, supplies, insurance, etc	40,634.70
For additions to Laboratory, Class rooms and Shop Equipment	6,380.63
For additions to Library.....	1,323.04

Total\$ 126,359.17

Permanent Improvements.

3. In permanent improvements, as buildings, etc..\$ 9,541.42

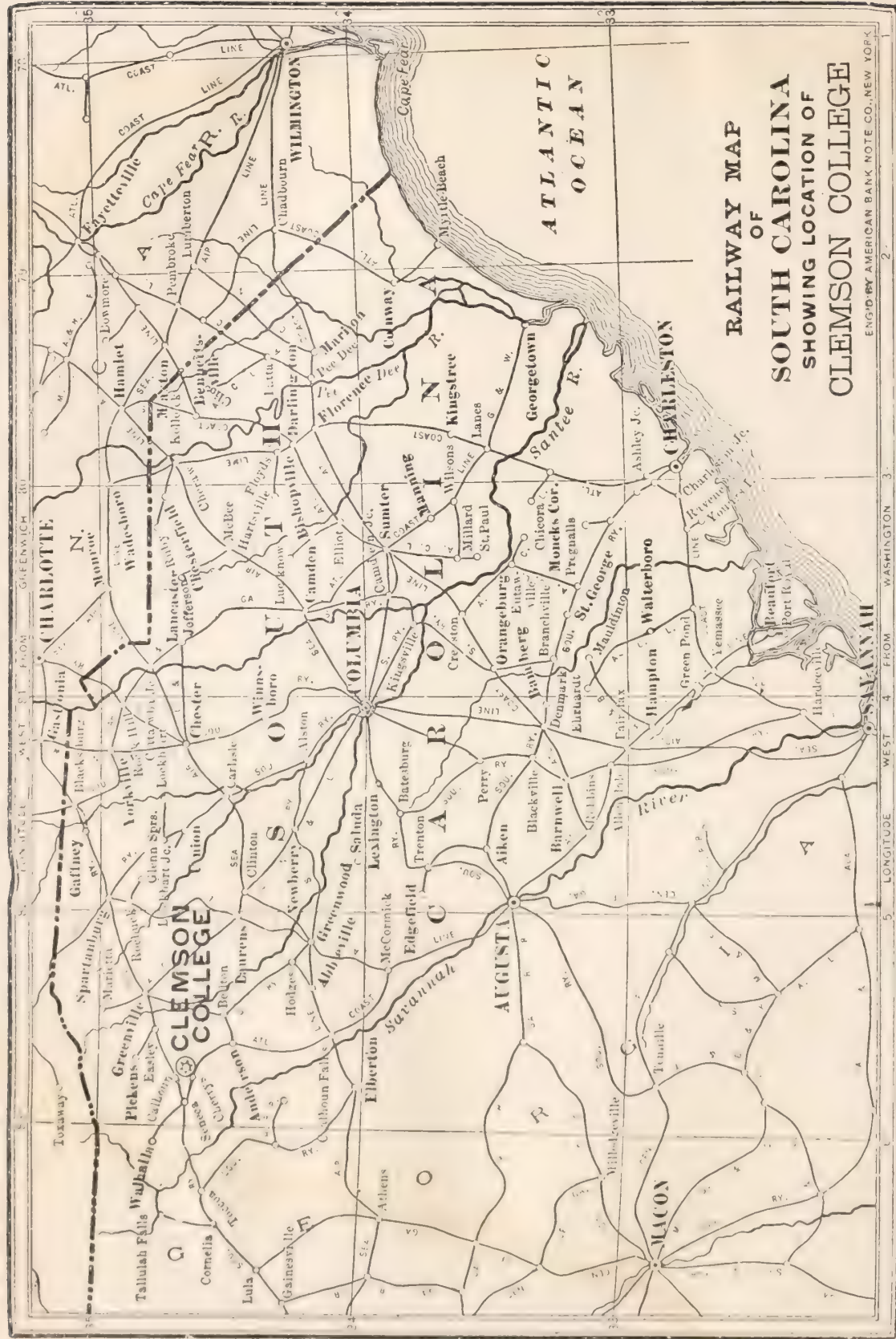
Deficit on Cadet Fund.

4. To make up deficit in cadet fund caused by increased cost of living, and reduction in numbers due to the dismissal of 304 students after April 1st, '08\$ 10,466.25

Condensed Summary of Expenditures.

For Public Work	\$ 92,257.96
For Operating College	126,359.17
For Permanent Improvements	9,541.42
For Deficit on Cadet Fund	10,466.25
Total Expenditure	\$ 238,624.80

It will be seen from the above that the actual cost to the State of educating a student at Clemson based upon the '08-'09 attendance of 653, and the actual normal operating cost of the College, \$126,359.17, is \$193.50, an amount probably smaller than any College of over 500 attendance in the United States and certainly lower than any State College for young men in South Carolina.



**RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE**

ENG'D BY AMERICAN BANK NOTE CO., NEW YORK

LONGITUDE WEST 4 FROM WASHINGTON 3

GROUND, BUILDINGS AND EQUIPMENT

Location

The College is located on the old Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is connected by telegraph and long distance telephone with all parts of the country. The post office is conveniently situated on the campus, and receives five daily mails.

Campus and Farm.

The College grounds occupy about 1296 acres of land, including the campus, sites of buildings and residences, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 149 feet, trimmed with gray sandstone. It contains 22 rooms, including recitation rooms, library and reading room, literary society and Y. M. C. A. halls, physical laboratory, besides the offices of the President, the Commandant, the

Treasurer, and a reception room. Adjoining this building is Memorial Hall, the College Chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building is a tower clock. The building is provided with steam heat and electric lights.

The Cadet Barracks comprise three large brick buildings. One is three stories high and contains 147 rooms for students, a dining hall 134 by 44 feet, and a kitchen 50 by 37 feet. The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure spring water. The rooms in the barracks are furnished with single-width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

The General Water Supply is collected from springs and surface streams, and is pumped from two stations into a stand-pipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage, etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and a

number of residences are connected with an adequate sewer system, which empties into the Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station. The seven principal College buildings are heated by steam.

New Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70 K. W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a three-wire 75 K. W. direct current generator.

A 75 K. W. rotary converter is used to convert from one kind of service to another.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through three 25 K. W. transformers. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The plant complete cost about \$25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric lights and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

Agricultural Buildings and Equipments .

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings of oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides class rooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology, veterinary science, dairying and animal husbandry, geology and mineralogy, and offices for the Experiment Station. It also contains a room 40 by 60 feet, with a gallery for a natural history museum, and a gymnasium hall of the same dimensions below.

The Horticultural Grounds embrace an area of thirty acres. Eight acres are devoted to apples for experiments purposes, six acres to peaches, two acres to grapes, two acres to pecans, one acre to plums, seven acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs and flowers.

The Greenhouse is 21 by 140 feet and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains three thousand large pot plants of various kinds and nine thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet. It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a dis-

secting room and a small room for hot-water plant, coal and general storage. On the first floor are rooms for office, instruments and medicines, toilet, horse-shoeing, harness closet, and an examining floor, operating table, soaking vat, four box-stalls and one tie-stall. On the second floor are rooms for attendant, storage of grain, kennels and cages for small animals, and a haymow.

Convenient to this building is a shed 24 by 40 feet, enclosed on three sides, but well lighted, and having a large hayloft. There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into four paddocks. In one of these is an open cattle-shed, 13 by 32 feet.

The Dairy Building is a wooden structure constructed and equipped to illustrate the methods of dairy practice.

The Experiment Station Dairy Barn is a building, 110 by 38 feet, located on one of the highest elevations of the College property. It is a thoroughly modern structure from the standpoint of both convenience and sanitary conditions. It has a concrete floor, is lighted by electricity, and contains water in all parts of the building for washing floors, mixing foods, etc. It is fitted with 38 Taylor steel stanchions, which are both strong and comfortable. At one end of the building are four 50-ton silos. The second floor, which has a capacity of 50 tons of loose hay, is equipped with a hay-carrier that will elevate a load of hay at a time.

A number of paddocks and pastures have been provided to facilitate the management and to furnish sufficient pasturage for the stock.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern

design, which are described more fully in connection with the equipment for instruction in Agronomy.

DIVISION OF AGRONOMY.

The classroom, laboratory and office of the agronomy division are located on the first floor of Agricultural Hall. The laboratory is supplied with the necessary equipment for familiarizing students with the more important economic plant seed.

The College farm has a large storage barn provided with silos, a cow barn furnished with various forms of stanchions, a mule barn provided with the most improved forms of stalls and feedracks, implement and wagon sheds for storage of tools, etc, and two large cribs for storage of corn.

Among agricultural machinery and implements may be mentioned the following: Self-binder, corn-harvester, Deering ball-bearing mower, Osborne mower, self-dumping rake, check-row corn-planter, Buckeye cultivator, B. F. Avery cultivator, Tower cultivator, disc-cultivator, spring-toothed harrow, smoothing harrows, various forms of pulverizers, manure-spreading machines, fertilizer and grain drill, various forms of small fertilizer drills, Planet Jr. drill, two Planet Jr. plows, scientific mill, stone grist mill, Tornado ensilage cutter, small thresher, hand-gin, rock-crusher, road machine, three terrace levels, and a 10 K. W. electric motor.

DIVISION OF GEOLOGY AND MINEROLOGY.

The division of geology and mineralogy occupies three rooms on the second floor of the new agricultural building.

The systematic collections contain about 2500 labeled

specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory and the museum, and are available to students and the public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying the more important species at sight; and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photo-micrographic camera, and all important accessories, are also provided.

The classroom is supplied with large physical wall maps of the world and of all continents, a complete series of topographic contour maps, furnished by the United States Geological Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geological department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all the publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

SOIL PHYSICS.

The soil physics laboratory is located on the ground floor of the Agricultural Hall and is provided with apparatus for the determination of water content, absorptive capacity, water holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

DIVISION OF HORTICULTURE.

The classroom of the horticultural division is located on the first floor of the Agricultural Hall. The greenhouse, hotbeds and cold-frames are located in the horticultural grounds where the principal practical work is done. The gardens, orchards and vineyards are field laboratories for instruction in horticulture.

DIVISION OF VETERINARY SCIENCE.

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The classroom, laboratory and office of the veterinary division are located in Agricultural Hall, classroom on the first floor, Rooms 15 and 16. The laboratory is supplied with microscopes, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work

DIVISION OF ZOOLOGY AND ENTOMOLOGY.

The laboratory, recitation room and office of this division are on the first floor of the Agricultural Hall. The laboratory is equipped with simple and compound microscopes, microtomes, dissecting instruments, photographic outfit, stereopticon, lantern slides and charts. The entomological cabinet contains a large number of injurious and beneficial insects.

The students have access to a small but carefully selected entomological library.

DIVISION OF DAIRYING AND ANIMAL HUSBANDRY

The dairy building is provided with steam plant and water-works, and everything required for making butter and cheese. In this laboratory are located the leading makes of cream separators, churns, and milk-testers.

DIVISION OF BOTANY AND FORESTRY.

This laboratory is located on the first floor of Agri-

cultural Hall, Room 14. It contains a good equipment for satisfactory work in botany and forestry, including 25 dissecting microscopes, 27 compound microscopes, student dissecting sets, student microtomes, Zimmerman microtome, embedding baths, balances, water still, incubator, Arnold and Koch sterilizers, autoclave, dry ovens, anærobic apparatus, cameras for ordinary and photomicrographic work. The students have access to a small botanical library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, the herbarium of the Botanist, including about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of central New York. A set of the F. V. Coville plants, of New York State, has also been added recently. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora.

DIVISION OF EXTENSION WORK AND FARMERS' INSTITUTES.

From its establishment until the present time Clemson College has been occupied in educating the boys of this state who were able to attend in improved methods of Agricultural and Engineering Practice. At their meeting last September the Board of Trustees decided that the time had come when this college could be of greater benefit to the people of the state. It recognized the fact that though destined to follow agriculture in after life many boys of the state are unable to attend the college. Then, too, there are many men in the state actually engaged in agriculture who can be helped by carrying to them the scientific facts of agriculture. In order that these classes might be reach-

ed and benefitted, the Board established in the Agricultural Department the Division of Extension Work and Farmers' Institutes.

The men of this division have nothing to do with the teaching in the college, but devote their whole time to helping the farmers and others of the state.

As at present constituted, the force of this division consists of a Superintendent, an Assistant in Dairy Husbandry, an Assistant in Rural School Agriculture, and an Assistant in Animal Husbandry. To this number it is hoped to be able to add an Assistant in Drainage Engineering. The men of this division work in two ways:

First: They form the basis of a permanent institute corps to hold institutes at such times as the farmers of the state are at leisure to attend. The majority of these institutes will be held in the rural districts, where they will reach those farmers most in need of them.

Second: Each of these men selects a few farmers scattered over the state who are interested in their special line of work. These men are visited regularly and receive the benefit of the advice of the expert. An accurate account of all operations and their results is kept and will be published in bulletin form for the benefit of others.

The Assistant in Rural School Agriculture will encourage the teaching of agriculture in the rural schools. To this end he will select a few schools and visit them regularly, giving regular agricultural instruction. In addition he meets the teachers in their various organizations and, by pointing out to them subjects and methods, encourages them to teach agriculture themselves.

In addition to this regular force, every man in the college and especially in the Agricultural Department and

the Experiment Station is called upon to help in the work. Each paper in the state is supplied once a week with a short article by some member of the faculty giving useful information upon some pertinent subject. This constitutes a good reading course for farmers and others.

The Engineering Department is now preparing a bulletin giving plans and specifications for building the simpler rural school houses and stands ready to extend similar help among other lines of rural construction.

A Correspondence Course in Agriculture, designed primarily for the benefit of the rural school teachers, is also to be established. This will be followed later by a number of short courses to be given at the college. Once a year during the summer a state institute or farmers congress, to last three or four days, will be held at the college.

Engineering Buildings and Equipment.

The Mechanical Engineering Building is a substantial brick structure containing about 35,000 square feet of floor space. On the first floor are the mechanical laboratory, machine shop, wood shops, forge shop, and foundry. On the second floor are the offices and drawing and designing rooms. The third floor is devoted to class rooms and to the division of civil engineering.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use, it also contains the electrical engineering lecture room.

DIVISION OF MECHANICAL ENGINEERING.

This laboratory is situated on the ground floor of the

Engineering Building, and occupies a room 51 x 45 feet, and contains the following equipment: ,

For Steam Engineering.—One 15-H. P. horizontal, locomotive type boiler; one 6-H. P. vertical boiler; one 6 H. P. Erie, plain side valve, throttling governor; one 5-H. P. vertical engine built by students; One 15-H. P. Payne high speed, automatic cut off engine; one Corliss cross compound engine, arranged to run either condensing or non condensing and with either or both cylinders with high pressure steam, one 7 KW Curtis steam turbine non-condensing, direct connected to a 2-pole direct current compounded generator; one Wheeler surface condenser, with combined air and circulating pumps; one set steam gauge testing apparatus; one Carpenter's Separating Calorimeter; 2 Carpenter's Throttling Calorimeters; 6 steam engine indicators of various makes; 4 injectors; 2 draft gauges; 5 steam gauges.

For Hydraulic Enginecring.—One Power Triplex pump; one Pelton water motor; 2 hydraulic rams; 3 duplex pumps of different makes; one weir; one Hook Gauge; one altitude gauge.

For Compressed Air.—One Clayton air compressor, water jacketed; one improved air motor.

For Fuel and Lubricants.—One Carpenter's coal calorimeter with scales, balances and oxygen generating device; one standard viscosimeter.

For Testing Materials.—One 100,000-pound Olsen automatic vertical testing machine driven by 5-H. P. Westinghouse electric motor, and fitted for either tension or compression; Thurston friction tester; one Fairbank's cement testing machine; One Vicat needle with proper sieves and moulds; one graduated flask for determining specific gravity; one moist closet for storage; one 3000-

pound transverse testing machine.

The Laboratory also contains a 5-H. P. Otto gasoline engine; one Ericsson hot air engine; a 6-H. P. transmission dynamometer, graduated to read horse-power direct and built by students; 4 platform scales; 4 spring balances; 7 mercury thermometers, one electrical resistance thermometer; two Bristol thermo-couples for reading temperature to 2000 and 2900 degrees F. respectively. All apparatus is so arranged that it may be used for separate or combined tests. Besides the apparatus in this room, the apparatus in the Power Station and the Pumping Stations are available for instruction and tests.

DIVISION OF ELECTRICAL ENGINEERING.

This division occupies two single story brick buildings, heated by steam and lighted by enclosed arc and incandescent lamps.

Electrical Instrument Laboratory.—This is a separate building, especially designed for delicate electromagnetic work, no iron, steel or other magnetic substances having been used in its permanent construction. Its equipment contains the following instruments and apparatus:—Leeds and Northrup potentiometer with volt bed and standard resistances for current measurement; Kelvin deka ampere balance; Weston laboratory standard voltmeter with multipliers; Becker analytical balance and weights; two 1-6 H. P. Crocker-Wheeler motors; fifteen galvanometers, (including tangent, Kelvin, D'Arsonal and ballastic instruments), nine standard resistance sets; three standard resistance and Wheatstone Bridge sets; four meter-wire bridges; one magnetometer; two standard condensers; commercial condensers; Weston and Carhart-Clark standard cells; ammeters; voltmeters; rheostats; keys; switches; storage

cells primary cells and other miscellaneous apparatus, also a quantity of special apparatus made in the College shops and laboratories.

The instruments in the above equipment are from such makers as Elliot Brothers, Nalder Brothers, Leeds and Northrup, Queen and Company, Weston Electrical Instrument Company, etc.

Dynamo Laboratory.—This building is 37 x 80 ft., with basement. The main floor is divided into a lecture room 35 x 25 ft., and a laboratory 35 x 53 ft. The basement contains a supply room and a large dark room.

The lecture room has raised seats and is equipped with instruments, illustration models and other demonstration apparatus, including an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory equipment contains the following instruments, machines and other apparatus: direct current instruments; voltmeters: two Weston portable; two Weston switchboard; one Jewel portable; ammeters: three Weston milli-voltmeters, with current shunts; four weston switch-board; one Jewell portable; wattmeters: two Thomson recording, and two Weston indicating.

Direct Current Dynamos: 17-KW Lundell, 15-KW Math-er, 2 1-2-KW Crocker-Wheeler, two 2-KW Kester, 15-H. P. Kester, 10 H. P. Kester, 1-2 H. P. Kester.

Arc Lightning Apparatus: Brush and Thomson-Houston Generators, General Electric Company constant current transformer, open and inclosed arc lamps.

Alternating Current Instruments: voltmeters: one Weston portable, one Whitney hot wire, five Thomson inclined coil, one Cardew, one Aryton and Perry, one Hoyt, one Kelvin electrostatic. Ammeters: one Westinghouse portable with current transformer, one Stanley hot wire,

seven Thomson inclined coil, one Siemens electro-dynamometer. Indicating Wattmeters: two Weston, two General Electric Company.

Alternating Current Apparatus: 15-KW General Electric Company, single, two, three and six phase revolving field generator, complete with marble switch board and full set of indicating instruments. 7 1-2 KW General Electric Company single, two and three phase rotary converter. 7 KW three phase converter built by students. General Electric Company single, two and three phase induction motor, three 3 KW and three 5 KW constant potential transformers. General Electric Company condensers, assortment of coils, models, etc.

Miscellaneous: 50 H. P. high speed McEwen automatic engine, 3 ton portable Crane, two Schaeffer and Budenberg tachometers, prony brake, rheostats, circuit breakers, switches, fuse testing apparatus, lightning arresters, etc.

The Dark Room is equipped with apparatus for high potential, high frequency and X-Ray work, and a Deshler-McAllister central station photometer with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50-H. P. engine and by motors. Steam and electric power for these is furnished by the central power plant, described on page 31. Students have access to this plant, and are thus enabled to see the practical workings of a combined electrical power, light, and heating plant, and to test its efficiency. The problem of power distribution and utilization can also be studied from a practical example.

DIVISION OF CIVIL ENGINEERING.

The collection of field instruments contains the fol-

lowing:

One complete transit with solar attachments; three engineer's transits; four railroad compasses; two six-inch vernier compasses; one precise level; three twenty-inch wye levels; one dumpy level; two architect's levels; one convertible architect's level; one drainage level; one Locke hand level; one binocular hand level; two stadia hand levels, with a supply of self-reading and target rods. One complete plane table; a Price current meter, with steel boat and truck sextant; aneroid barometer; flag poles; tapes; chains and all necessary accessories.

The office equipment includes planimeter, slide rules and drafting instruments.

DIVISION OF PHYSICS.

The physical lecture-room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and experimental work of a general course in physics.

DIVISION OF DRAWING AND DESIGNING.

This division is located on the second floor of the Engineering Building, and occupies seven rooms, two of which are used by the Freshman Class in Freehand Drawing, two by the Freshman Class in Mechanical Drawing, one by the Sophomore Class in Mechanical Drawing, one large room by the Junior and Senior Classes in Mechanical Drawing and Machine Design, the other as an office.

These rooms were designed for the use of the division, and are of ample size, well lighted, and well equipped with individual lockers for about 500 students, and drawing table for about 25 students at a time in each room.

They also contain a large number of models of various kinds; reference books and tables; and a display of catalogues and drawings from manufacturing firms and of the

best student work, all of which is of great benefit to the student in his work. The more expensive and less used instruments are kept in the office for the use of any student needing them. Two blue print rooms adjoin the other rooms of the division, and are well equipped with all necessary frames and apparatus for printing by electricity and sunlight. All students are required to furnish their own instruments, boards, T squares and other material. They are advised to buy these at the Cadet Exchange, where samples can be seen and wholesale prices obtained. All drawing tools used by students must be approved by the instructor in charge; second hand or inferior instruments will not be accepted. Students make a mistake in buying low priced instruments, which appear to be of good quality, but are inferior and will not give good service, soon necessitating the purchase of another set.

DIVISION OF FORGE AND FOUNDRY.

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 x 44 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down draft forges; 18 Eagle anvils equipped with small tools; a 60 inch exhaust fan; a No. 4 direct connected pressure blower; a drill press; an emery grinder; a bending cone; a Buffalo iron shear; two swage blocks; a vise and work bench. The other system consists of 18 Sturtevant down draft forges; 18 Eagle anvils, thoroughly equipped with small tools; a 60 inch exhaust fan, and a No. 4 pressure blower, both directly connected to electric motors.

Foundry.—This building occupies a space 43 x 76 feet, and is free from posts or other obstructions. It is equipped with a 26 Victor Calbion cupola, driven by a No. 7 pressure blower; a Millets core oven; a two ton

post crane; 8 improved moulder's benches; hand, bull and truck ladles; and a full equipment of the moulders tools.

The brass foundry is equipped with an 18-inch brass furnace, crucibles, tongs, drying stone, and other accessories.

DIVISION OF MACHINE WORK.

The Machine Shop occupies the ground floor and part of the basement of the south-west wing of the Engineering Building, the main floor being 45 x 100 ft., lighted from one end and both sides, and steam heated.

The equipment is as follows: Suitable benches and vises for chipping, filing, etc., and for assembling machines; one 18-inch 12 ft. engine lathe; one 18-inch 8 ft. engine lathe; eleven 14-inch six foot engine lathes; one 10-inch four foot turner's lathe; one 15-inch x 8 foot speed lathe; two universal milling machines; two 18-inch vertical drilling machine; one 28-inch vertical drilling machine; one 22-inch x 6 ft. planer; one universal tool and cutter grinder; one 10-inch x 32 inch universal grinding machine; one 14-inch shaping machine; one 10-inch slotting machine; one 22-inch wet emery tool grinder; one twist drill grinder; one dry emery grinder; one 36-inch grind stone; one power hack saw; one fan blower; forge, anvil, and set of smith's tools.

Twelve sets of tools in portable cases are provided for the use of the students, each set containing an assortment of chisels, files, cutting tools for lathe work, hammer, monkey wrench, steel scales, screw driver, spring calipers, dividers, scriber, rule, center punch, center gage, one inch micrometer caliper, oil can and cotton waste.

A tool room is located in one end of the shop, in which is kept an extensive assortment of tools, some of which are; a set of twist drills from 1-6 to 2 inches; a set of machinist hand reamers from 1-8 inch to 4 inches;

a set of Morse standard taper reamers; a set of taper pin reamers; a set of internal and external caliper gages from 1-4 inch to 2 1-2 inches; a set of U. S. standard taps and dies from 1-16 inch to 1 1-4 inches; a set of clamps, dogs, lathe, planer and shaper tools, milling machine cutters and emery wheels; a center grinder; standard gages; and internal and external micrometer calipers from 0 to 6 inches.

A supply of steel and brass, and a large assortment of screws, bolts, nuts, etc., are kept in stock.

All of the machines are driven from one line shaft, running full length of the shop, and driven by a 15 horse power electric motor that was built in the shop.

Artificial lightning is accomplished by means of 4 arc lamps.

DIVISION OF WOOD WORK

The Woodwork Division consists of two shops, both on the ground floor. The first, 37 x 100 ft. is divided into two class rooms, both of which are supplied from one well-equipped tool room.

The Freshman class room contains eight turning lathes, and fifteen work benches, each supplied with a full set of tools.

The Sophomore class room is equipped with eight turning lathes, with tools, eighteen work benches, and ninety sets of bench tools, a separate set for each student. This room also contains a large pattern lathe, one 30-inch band saw, one jig saw, two grind stones, and one universal trimmer.

The other shop is equipped with planing mill machinery, consisting of a double roll planer, one rip saw, one cross-cut table saw, one swinging cut-off saw, one lathe with 12-foot bed, one jointer, one moulding machine, one tenoning machine, one doubleheaded shaper, one single

spindle carver and shaper, one mortising and boring machine, one re-saw, one swinging-arm sand papering machine, and an assortment of benches, clamps, glue pots, etc.

This shop is 40 ft. x 100 ft., and is driven by a 20-H. P. electric motor. Each class room also has its individual motor drive.

A lumber yard and steam dry kiln adjoins.

Chemical Buildings and Equipment.

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new somewhat similar building, 35 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Three of these, are employed as laboratories for agricultural seniors and juniors. Of the remaining rooms on this floor, one is a balance room, while the other is reserved for such use as the demands upon the department may require.

On the second floor of this building there are two large laboratories, one for the juniors in analytic chemistry, the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accommodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for

experimental work.

The basement of the building is used for assaying, for the preparation of distilled water and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to State analytical work and agricultural analysis. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is used for agricultural analysis. Adjoining is a balance room, in which provision is made also for electrolytic apparatus. Of the remaining rooms, one is used for water analysis, the other as an office.

On the second floor of this building there are seven rooms: a lecture-room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library and professor's laboratory.

The lecture-room will seat 170 students, the seats being arranged in tiers.

The hoods in this building are all connected by earthenware pipes with a tightly built room just under the roof, over which there is a large ventilator.

The rooms in the basement are used for assaying ores, and for storage. In one of these rooms there is a gas machine for supplying gas especially to the new building, though this machine and the one in the old building are so

arranged that either may be used to furnish gas to both buildings in case of necessity.

Textile Building and Equipment.

The building is a brick structure of modern cotton mill design, 168 by 75 feet. It is of the slow burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing office, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the student an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30 H. P., 220-volt, direct-current Westinghouse motor, driving the carding machinery, and a 20 H. P., 220-volt, direct-current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by the experimental dyeing laboratory, hand looms, power looms, a lecture-room and two offices. The power machinery on this floor is driven by a 20 H. P., 220-volt, direct-current General Electric Company motor.

The basement, which is situated under the right-hand half of the building, is occupied by the dye-house, and is nicely equipped for that purpose.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-

heating system and automatic fire-sprinklers from The D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

DIVISION OF CARDING AND SPINNING.

Pickers.—One Atherton automatic feeder; one Atherton breaker; one Atherton finisher lapper, with evener motion.

Cards.—One Saco and Pettee 40-inch revolving top flat; one Mason 40-inch revolving top flat; two traverse wheel grinders; two drum traverse grinders; stripping and burnishing rolls; two complete sets of carder's tools.

Combing.—One Mason sliver lap machine; one Mason ribbon lap machine; one Mason six-head combing machine.

Railway Heads.—One Saco and Pettee railway head, with evener motion, stop motions, and metallic rolls; one Mason railway head, with evener motion, stop motion, and metallic rolls.

Drawing.—One Saco and Pettee drawing frame, four deliveries, stop motions, and metallic rolls; one Mason drawing frame, four deliveries, stop motions, and metallic rolls.

Drawing.—One Saco and Pettee drawing frame, four deliveries, stop motions, and metallic rolls; One Mason drawing frame, four deliveries, stop motions, and metallic rolls.

Fly Frames.—One Saco and Pettee 12-inch by 6-inch 40-spindle slubber, with latest differential motion; one Saco & Pettee 8-inch by 4-inch 60-spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 7-inch by 3 1-2-inch 80 spindle fine roving frame, with latest differential motion; one Woonsocket 6-inch by 2 1-2-inch 96-spindle jack roving frame, with Daly's improved differential motion.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mule Spinning.—One Mason self-acting spinning mule, 120 spindles, 1 3-4-inch gauge, with all latest improvements.

Spooling.—One Draper spooler, 40 spindles; one Saco & Pettee spooler, 72 spindles; one Barber & Coleman knitter.

Twisting.—One Draper combination wet and dry twister, 48 spindles; two Fales and Jenks wet twisters, combination filling and taper top wind, 70 spindles each.

Winding.—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Company bobbin winder; one Geo. W. Payne & Company skein winder; one Universal cone and tube winder.

Reeling.—One D. A. Tompkins Company adjustable reel, 50 spindles.

Warping.—One Draper section warper; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

The divisions of carding and spinning are equipped with all necessary supplies, such as doff-boxes, roving-cans, bobbins, spools, cops, cones, tubes, and change gears for all machines.

DIVISION OF WEAVING AND DESIGNING.

Hand Looms.—Seventeen hand looms, with 4 by 4 box motion, and 30 harness shedding engines, arranged for

four beam work.

Power Looms.—One 40-inch Northrup cam loom, with warp stop motion and automatic filling magazine; one 28-inch Northrup cam loom, with warp stop motion and automatic filling magazine, also fitted with Stafford 20-harness dobby; one Mason 36-inch gingham loom, with 4 by 1 box motion; one Mason 40-inch loom, with Stafford 20-harness dobby, also arranged for center selvage motion; one Mason 44-inch fancy cloth loom, with 24-harness dobby; one Stafford 30-inch fancy cotton loom, with 20-harness dobby and leno attachment; one Stafford 30-inch dress-goods loom, with Stafford 400-hook, single-lift, swing-cylinder Jacquard; one Knowles 40-inch "Gem" loom, with 30-harness dobby, 4 by 4 box motion; one Crompton & Knowles 36-inch fancy cotton towel loom; one Crompton 36-inch loom, 4 by 1 drop box motion, fitted with 624-hook, double-lift, swing-cylinder Jacquard, tied for weaving table damask; one Whitin 40-inch cam loom, arranged to weave up to six harness; one Whitin 40-inch fancy cotton loom, fitted with 20-harness dobby; one Whitin heavy pattern duck loom; one Knowles 30-inch fancy cotton loom, 2 by 2 box motion, 16-harness dobby; one Kilburn & Lincoln 40-inch loom, arranged for dobby.

Dressing.—One Davis & Furber Dresser, complete.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

This division is also equipped with one floor stand, fitted with eight-harness dobby and leno attachment, built especially for illustrating leno weaves; one Jacquard tying-up frame; warping pegs, beaming frames; drawing-in frames; extra heddles and heddle frames; reeds; change gears, etc.

DIVISION OF TEXTILE CHEMISTRY AND DYEING.

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dye-house. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accommodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

Dye-House.—Nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one steaming and ageing box; one mercerizing apparatus for yarn; one calico printing machine; one 20-gallon copper kettle; one set copper measures; one dry closet. There is also an equipment of reels, yarn-testers, analytical balances, etc., and necessary instruments for experimental purposes.

DEPARTMENT LIBRARY.

For the use of students and instructors, a reading room in the textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department, and an equipment of old hand machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

Office of Fertilizer Inspection.

The main floor and half of the basement of the two-story brick building between the chemical and the engineering buildings are used for the office of the Board of Fertilizer Control. The Clemson College post office is located in the other half of the basement, and the college printery occupies the second floor. The printery equipment is as follows:—One Babcock regular drum cylinder printing press, 22 by 27 inch bed; two Chandler and Price job presses; one Chandler and Price cutter; one Morrison stitcher; two perforators; one letter folder; two Hammond cabinets; two imposing stones; one No. 1 Model linotype machine with supply of matrices for same; a supply of type, furniture, etc. All the machines are driven by individual motors. The college reports, bulletins and miscellaneous stationery are printed here, much of the work being done by students.

GYMNASIUM.

A large room in the basement of the Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. During the past year this room was equipped with well-selected gymnasium apparatus. Among the apparatus are to be found a horizontal bar, parallel bar, spring board, travelling rings, flying rings, climbing rope, horse, low parallels, floor mats, and take-off board.

The object of the gymnasium is to give to those students interested in athletics training all the year around, so that they may constantly be in good condition for work on the athletic teams. It is also designed for those students who do not take other forms of exercise, but depend upon the gymnasium for their only means of physical development. The work is not required, but is engaged in by a large number of students. A member of the faculty superintends the work and directs the exercises.

MUSEUM.

On the first floor of the Agricultural Hall, the Museum of Natural History is located. During the past year the museum has been furnished with large cases, and the collections of the geologist, entomologist and botanist have been installed.

HOSPITAL.

The Hospital, located about a quarter of a mile from the Barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

LAUNDRY.

The Laundry is a brick building specially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for the students.

LIBRARY.

In the main building is a series of rooms specially constructed for the use of the Library. There are now upon the shelves 9,310 volumes, classified under the various heads of literature, history, biography, science and reference books. In addition to these in the general library, there are 1,493 volumes in Experiment Station and department libraries of the College. There are also about 5,000 government publications and 200 reference books, together with about 6,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to 35 of the leading monthly periodicals, 14 weekly, the principal daily papers of the State and many of the county papers.

THE CLEMSON RELICS

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

THE CALHOUN RELICS

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

RESIDENCES AND HOTEL

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, and thirty smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building with two eight-room annexes, situated on a hill overlooking the campus, is operated as a club by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

1. Agricultural Department

Agriculture.

Geology and Mineralogy.

Horticulture.

Veterinary Science.

Zoology and Entomology.

Dairying and Animal Husbandry.

Botany and Bacteriology.

Extension Work and Farmers' Institutes

2. Engineering Department

Electrical Engineering.

Mechanical Engineering.

Civil Engineering.

Physics.

Drawing and Designing.

Forge and Foundry Work.

Machine Work.

Wood Work.

3. Chemical Department

Chemistry.

Metallurgy.

4. Textile Department

Carding and Spinning.

Weaving and Designing.

Textile Chemistry and Dyeing.

5. Academic Department

English.

History and Political Economy

Mathematics.

Modern Languages.

6. Military Department

Military Science and Tactics.

7. Agricultural Experiment Station

ORGANIZATION OF THE COLLEGE

Organization and Mode of Government

Board of Trustees. This board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations.

The President is the executive head of the College, and has general supervision of all matters within and pertaining to the College, and is charged with executing all rules and regulations passed by the Board of Trustees.

The College is divided into seven departments, namely: I. Agricultural, II. Engineering, III. Chemical, IV. Academic, V. Textile, VI. Military, VII. S. C. Agricultural Experiment Station. A Director is at the head of each department, and is responsible to the President for its conduct and success. The departments comprise the various divisions indicated on the opposite page. The divisions are in the immediate charge of the Professors, Associate and Assistant Professors, and Instructors of the respective departments. The President conducts all official business with each department through its Director.

The Directors and full Professors constitute an advisory body to the President, known as the General Faculty, which meets periodically to confer upon all matters pertaining to the interests of the College and students.

In order to aid him in his executive duties the President appoints Committees from the Officers of Instruction to which are assigned certain specified lines of work.

The Discipline Committee, established by the Board of Trustees, is composed of the President, the Directors and the full Professors. All important questions of discipline

involving possible suspension or dismissal are considered by this body. The treatment of minor offenses rests with the Commandant.

The students are allowed wide latitude in carrying on affairs which concern themselves, such as athletic, literary, musical and social organizations. The aim of the Faculty is to assist in every possible way in making these interests helpful to the student body as a whole. In these matters the disposition is to allow a reasonable amount of time for recreation, and to contribute as far as possible towards making the students contented and happy.

MILITARY ORGANIZATION AND MODE OF GOVERNMENT

The following extracts from the Regulations for the Government of Cadets explain the organization and mode of government of the corps.

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothing, equipments, etc., shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc., of the cadets at least once each week, and make a report hereon to the President."

"3. For instruction in tactics and for military police and discipline the corps of cadets will be organized into

one or more battalions of two or more companies each, and a band when practicable. In case the number of cadets will permit of the formation of two or more battalions, the organization will be regimental."

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties and most exemplary in their general deportment. As a rule, the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

LEAVE OF ABSENCE

All communications from parents, requesting leave of absence from the College for their sons, must be addressed directly to the President, not through the cadets.

Parents must remember that as long as their son is a student in the College he must submit to the rules made for the government of all.

A parent has the right to *withdraw* a son from College, but not to insist that he be given a leave of absence in violation of the rules or policy of the Institution. To obtain a leave of absence his reasons must be satisfactory to the President.

The rules governing in case of permits to visit home during the session of the College require that cadets who have accumulated more than eight demerits in any one term, and who have fallen below grade two in their studies on any report, will not be allowed to leave College during the term except in cases of extreme sickness or death in the family.

No leave of absence or honorable discharge will be granted during the last term, except for serious causes.

A student who has been granted leave of absence and who stays over the time allowed, unless for sickness or other good and valid reasons acceptable to the President, will lose his place in the College and will be required to file a new application for admission and to pay the matriculation fee of \$5 again before being allowed to re-enter. In case he has been sick, a certificate from the attending physician must be submitted.

GENERAL REGULATIONS

The "Rules and Regulations for the Government of Cadets," a copy of which is furnished each cadet, contains the following:

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks, except those who live with their parents or relatives near enough to attend from their homes.

Those occupying a room are consulted before another student is assigned to that room. A student not satisfied with his roommate has the privilege of applying for permission to move to another room, and such applications are granted when practicable.

No trunks, bags or boxes will be allowed in the rooms of cadets. Trunk room accessible at stated times will be provided for storing trunks.

The practice known as "hazing" is positively forbidden. All cadets, upon matriculation, are required to sign

a pledge not to indulge in hazing or injuring in any form the person of any cadet or give countenance or encouragement thereto while a member of the corps of cadets. Any cadet indulging in this practice will be dismissed from the College.

If any cadet shall consider himself wronged by another, or by an officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

Cadets are forbidden to keep in their possession any firearms or other weapons not issued by the proper authority.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Any cadet who leaves barracks without authority between retreat and reveille shall be dismissed.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

The smoking of cigarettes is positively forbidden. During the hours from 9:00 A. M., to 1:00 P. M., and from 2:00 P. M., to 5:00 P. M., cadets will not be permitted to smoke on the campus or in the college buildings.

Cadet "limits" is defined as all the college lands with certain excepted places. Cadets not otherwise prohibited are permitted during release from quarters to be on the above mentioned grounds without special permission.

Demerits will be awarded for every unremoved report, the number depending on the nature and degree of the offense.

Any cadet receiving 67 demerits during any term shall be brought before the Discipline Committee, and shall be dismissed or less severely punished.

Cadets who receive no demerits during any calendar month will be given a credit of eight demerits to be applied in removing any demerits that may have been charged against them during any month of that term.

For infraction of rules cadets are punished according to the gravity of the offense.

Punishment consists of confinements (detention of cadet in his room), confinement to barracks or other specified limits, reprimands, extras, (walking equipped as a sentinel), reduction to ranks (for officers and non-commissioned officers), arrests, close arrests, suspension, and dismissal from college.

Punishments for offenses are awarded by the Commandant of Cadets, and for extraordinary or unusual offenses by the President or the Discipline Committee, according to the nature of the case.

The Commandant and his officers have the right to inspect everything in a cadet's room.

GRADES AND REPORTS

Reports of class-standing and discipline are sent to parents at intervals of approximately one and one half months throughout the session. During 1910-1911 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later: October 28, 1910, December 16,* 1910, February 10, 1911, March 17,* 1911, April 28, 1911, and

June 9, 1911. Dates marked with the asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

The session is divided into three terms, ending December 22, 1910, March 24, 1911, and June 13, 1911, respectively.

RULES FOR RE-EXAMINATION AND PROMOTION

1. No re-examination shall be granted to a student in a subject in which he has made a class mark of less than 60 per cent. for the term, or an examination mark of less than 40 per cent.

No student shall be allowed re-examination who makes less than 60 per cent. on more than three term examinations during the session, or more than two examinations for one term, provided that if all three failures are in the same subject, he may be allowed re-examination in one additional subject for one term.

2. A student who fails on a re-examination or term class mark shall be required to take that work over with the class, and schedule it first.

3. A student, who for any reason, fails to take his re-examination at the scheduled time, shall not be allowed to take the examination except by permission of the general faculty.

4. All re-examinations, except for Seniors, shall be held during the first five days of the session, provided however, that if a student has missed all term examinations on account of sickness he may be granted re-examinations at special times suitable to the faculty and to the instructor concerned.

5. Students who are granted special privileges to make up work shall be required to report at the next scheduled period after the privilege is granted, and a list

of such delinquents shall be furnished each instructor concerned, and deficient subjects in the lower class shall be made up first.

6. A failure in practical work shall have the same weight as a failure in a theoretical subject.

7. A student below the Junior class shall not be granted an irregular course.

8. A student taking the class over forfeits all previous records in that class.

9. Each student shall be required to make up all deficiencies before he is given permission to change his course, or he must take these deficient subjects along with his new course, and he shall be classed as a conditioned student until these deficiencies are removed.

10. No student shall be promoted from one class to another who has a failure in more than one *subject* for the preceding year, and a student who is promoted with work behind shall be classed as a *conditioned* student, and shall be required to schedule first the subjects on which he is deficient.

11. No student who has work to make up shall be promoted to the Senior Class.

College Institutions

RELIGIOUS EXERCISES

Chapel Services.—There is preaching in Memorial Hall every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by a resident minister or a member of the faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday school, at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

YOUNG MEN'S CHRISTIAN ASSOCIATION

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ, as their divine Lord and Saviour; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and daily chapel exercise. The activities include; a religious service on Sunday evening, a mid-week prayer-meeting on Wednesday evening, a daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

The Bible department offers four courses of study; two on the life of Christ; one, studies on the life of St. Paul; and the fourth a study in the Old Testament. These classes meet on Sunday evening and are led by students; these student leaders are prepared for this work through training classes led by members of the faculty, the local ministers and the general secretary. During the past year 338 cadets were enrolled in 35 of these group classes. This department also conducts Bible institutes and special training conferences. A week's series of Bible lectures, delivered by some recognized biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervision of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. A small but select library is kept in the office of the general secretary, where it is always accessible to the members.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts, cannot be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the College, either as a disciplinarian or instructor; neither is he a College preacher. But he is an older and more experienced student employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. His office is in room 84, old barracks, where he will be glad to meet all students.

Parents and students desiring further information should write to the general secretary at the College, or to the president, Cadet E. N. Sitton.

CARE OF THE SICK

The Surgeon is one of the regular officers of the Col-

lege, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College Hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be promptly notified of sickness of any consequence. In case of serious illness the Surgeon will telegraph them.

STUDENT LABOR

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and, when practicable, students are employed in this work, and are paid at the rate of eight cents an hour. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

LITERARY SOCIETIES

Three literary societies, the Calhoun, the Columbian and the Palmetto, furnish a valuable supplement to the

work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly, on Saturday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees' Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small initiation fee is charged, and small monthly dues to meet running expenses. All students are advised to join one of these societies.

STATE ORATORICAL CONTEST

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman University, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

PUBLICATIONS BY THE STUDENTS

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the

College session.

An annual, an illustrated volume, is published under the auspices of the senior class.

There is also *The Tiger*, published bi-weekly, which is devoted largely to athletics.

THE SCIENCE CLUB

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the faculty and others.

THE CLEMSON BIOLOGICAL CLUB

This club is open to members of all the faculties of Clemson College and to all students. Its object is to stimulate interest in biological subjects, and to keep its members fully abreast of current biological work and thought.

A regular meeting is held once each week in the Agricultural Hall.

LECTURE COURSE

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1909-1910 the following lectures and concerts were given:

Victor's Band.....	Oct. 9.
Cluxton Musical Company.....	Oct. 23.
Hinshaw Grand Opera Company.....	Nov. 6.
Gov. "Bob" Taylor.....	Dec. 9.
Italian Boys.....	Jan. 17.
Central Grand Concert Company.....	Mar. 10.
De Witt Miller.....	Mar. 19.
Hannibal A. Williams.....	Mar. 25.
Hannibal A. Williams.....	Mar. 26.
The Floyds.....	Apr. 9.

CADET EXCHANGE

A Cadet Exchange is maintained, where students may purchase at wholesale prices necessary articles, such as books, stationery, collars, cuffs, underwear, etc.

COLLEGE ATHLETICS

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.) and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.).

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an athletic Council, con-

sisting of members of the Faculty and of the student-body. This council consists of nine members—two members of the Faculty, the president and secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty, chosen by the Faculty and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. *Monthly Standing.*—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. *Sessional Standing.*—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the next college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. *Student Taking Class Over.*—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play, unless he passes in the first and second terms without any failures, and in otherwise eligible.

4. *Graduate Students.*—No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work: that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. *Irregular or Special Student.*—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty

Athletic Committee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

Field Day.—May 1st is observed as a holiday for contest in track and field athletics, such as running, hurdling, high and broad jumping, pole-vaulting, hammer-throwing, putting the shot, etc., and is known as "Field Day."

ADMISSION OF STUDENTS

COURSES OF STUDY, FEES, ETC.

Admission of Students

Candidates for admission must be seventeen years of age.

Students desiring to enter college should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 14th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College subject to their passing the required examinations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and

free from contagious diseases including tuberculosis.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class.

(b) As between applicants of equal preparation, the oldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other States may be admitted, and when so admitted, may continue in College until they complete their course.

(f) Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the President's office and matriculate *before they will be assigned to quarters in the barracks*. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of the fees. (See page 79).

Matriculation is equivalent to a pledge to conform to the rules of the College.

Entrance Requirements

For admission into the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography, and history of the United States.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with the ordinary principles and operations of arithmetic. Wentworth's Practical Arithmetic is recommended as a suitable text-book.

Algebra.—The detailed requirements are as follows: Definitions and notation, fundamental operations, including laws of signs, and the interpretation of negative results; use of parenthesis; factoring; highest common factor; lowest common multiple; single and complex fractions; simple integral and fractional equations with one unknown number, and problems leading to such equations; simultaneous equations of the first degree, with applications to solution of problems; involution of monomials, and polynomials; evolution of monomials and polynomials; theory of exponents with applications; radicals, including solution of equations involving rationalization; simple operations with imaginary expressions; pure and affected quadratic equations containing one unknown number, with application to problems.

The student should cover carefully the whole ground here specified, and should acquire a clear understanding not only of algebraic processes, but of the principles and reasons involved in every operation. Students fail on entrance examinations more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book.

A satisfactory treatment of the topics in algebra may be found in Wentworth's New School Algebra (used in the public schools).

English.—Applicants are examined in spelling, sentence analysis, and oral reading, and are required to write short essays on an assigned subject.

Geography.—Applicants must possess a fair knowledge of general geography, such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography, or other standard text books of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and positions of the continents, and locations of the principal mountains, plateaus, river basins, and costal lowlands; influences of land forms and climate upon the life and industries of the inhabitants; locations and outlines of important countries, particularly those of America and Europe, and of the States in the United States; locations of great cities in all countries, and conditions favorable to the growth of cities.

History. —A School History of the United States, by White, is the text-book recommended. Any other school history may be used in place of the one named.

Entrance Examinations

Entrance Examinations are held during the first week of the opening of the session, September 15th to 17th, 1910, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules, beginning at 9 a. m.:

For Admission to the Freshman Class

Arithmetic—Thursday, September 15, 1910, at 9 a. m.

Algebra—Thursday, September 15, 1910, at 2 p. m.

English—Friday, September 16, 1910, at 9 a. m.

Geography—Friday, September 16, 1910, at 2 p. m.

History—Saturday, September 17, 1910, at 9 a. m.

Examinations are held at the close of each term, and reports are sent to parents, giving the results of those examinations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent, on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

For Admission to the Preparatory Class

Arithmetic—Thursday, September 15, 1910 at 9 a. m.

English—Friday, September 16, 1910 at 9 a. m.

Geography—Saturday, September 17, 1910 at 9 a. m.

Upon passing satisfactorily the required examinations, the Committee on examination furnishes the applicant with a certificate to that effect, and upon presentation of this certificate at the President's office he is assigned to the class recommended by the Committee.

For Admission to Advanced Standing

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled on the following pages. Such applicants should report with other new students during the regular examination period and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

For Admission to State Scholarship

Examinations for admission into the beneficiary schol-

ships established at the recent session of the Legislature are held by the various county boards of education, and can not be given at the college. For further particulars in regard to these scholarships, see page 81.

Fees and Expenses

The regular fees for the session are as follows:

Incidental fee	\$ 5.00
Medical fee	5.00
Gray uniform	23.98
Khaki uniform	5.20
Breakage fee	3.00
Board, washing, heat, light, etc.	76.52

Total\$118.70

These charges must be paid in quarterly installments as follows:

September 14, 1910	\$ 61.31
November 16, 1910.....	19.13
February 1, 1911.....	19.13
April 4, 1911.....	19.13

Total\$118.70

Tuition students pay \$10.00 per quarter additional. Free tuition is allowed only to South Carolina students. Books and other necessary articles will be furnished by the College at an approximate cost of \$20.00. Each student must provide himself with four sheets, two blankets, one comfort, six towels, two pillow cases, one pillow and two single mattress covers.

Remittances should be made in cash, by money order, New York exchange, or by local check, payable to Dr. P. H. E. Sloan, Treasurer, Clemson College, S. C.

A deduction will be made for board and washing only when a student is absent one month or more.

The breakage fee is a deposit to cover damage or destruction of College property, and any amount remaining to the credit of a student at the end of the session will be returned to him. Whenever College property is damaged the cost of repair is charged to the individual student, if the responsibility can be determined. Otherwise the cost is divided equally among all the students. Any student whose breakage account exceeds \$3.00 will be required to make another deposit.

A fee of \$1.50 is charged for diploma, payable before graduation.

Free Tuition

Section 1120, Revised Statutes of South Carolina, 1893, Volume I, setting forth the powers and duties of the Board of Trustees, contains the following provision:

"They shall charge each student a tuition fee of forty dollars per annum;..... indigent students shall not be required to pay said tuition fee."

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

State Scholarships

By an Act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and apportioned among the counties in the same manner as the members of Senate and House of Representatives.

State Scholarships.

By an Act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of \$100 per annum each, and apportioned among the counties in the same manner as the members of the Senate and House of Representatives.

The law provides: "That the said scholarships shall be awarded by the State Board of Education, upon the recommendation of the County Boards of Education of the several counties, to the most worthy and needy young men of such age as is fixed by the Board of Trustees of said college for other students, who shall have passed an approved entrance examination upon the common school branches and made at least sixty per cent. upon such examination; and preference shall be given to those young men who desire to take the agricultural and the textile courses; Provided, That not more than one scholarship from each county shall be open to the textile course."

Examination questions are to be prepared by the President and Faculty of the College and sent to the County Board of Education of each county on or before the 15th day of July in each year, with a statement of the number of vacant scholarships to which the county is entitled. The County Boards of Education shall hold the examinations by numbers, i. e., by requiring each applicant to draw a number from a miscellaneous collection of numbers furnished by the County Board. Each applicant shall then seal his name in an envelope, which shall be kept sealed by County Boards of Education. The applicants shall then put their numbers and not their names on their papers. The papers shall be forwarded to the President of Clemson College and the mem-

bers of the Faculty of that institution, who may be designated by the President, shall examine the papers and return the marks of the applicant to the County Boards of Education by the numbers as furnished to them. The County Boards of Education shall then open the envelopes containing the names and make recommendations as to the award of the scholarships to the State Board of Education.

Section 4 reads: "That before applying for said scholarships applicants shall make proof, under oath, to their respective County Boards of Education, as required by law for scholarships in the South Carolina Military Academy, of their financial inability to attend college, before they shall receive from said board permission to stand such examination."

The law further provides that these scholarships "shall each continue for the term of four years, or for such length of time as the beneficiary shall be able to maintain himself and comply with the rules of the College; and said sum of one hundred dollars per annum shall be placed to the credit of each of said beneficiaries, and applied towards the payment of his board and other necessary school expenses."

Note.—Scholarship students will therefore have to deposit \$18.70 with the Treasurer at the beginning of the session. This amount is approximate, depending on the price of the uniform.

Private Textile Scholarships for Two-Year Course.

Victor Manufacturing Company Scholarship—Established by Lewis W. Parker. Value \$50.00.

Willimantic Scholarship.—"In memory of W. E. Barrows, a friend of mill operatives." Open to any resident of the State in need of assistance, and who is recommended by his employer. Value \$50.00.

Metz Scholarship.—By H. A. Metz, of H. A. Metz

& Co., New York. Value \$50.00.

Draper Scholarship.—By Draper Co., Hopedale, Mass.
Value \$50.00.

County Apportionment

The one hundred and sixty-five scholarships provided for in this institution by the Legislature are apportioned to the counties of the State according to law, as follows:

Abbeville	4	Greenwood	4
Aiken	5	Hampton	3
Anderson	6	Horry	3
Bamberg	3	Kershaw	3
Barnwell	4	Lancaster	3
Beaufort	4	Laurens	4
Berkeley	4	Lee	3
Calhoun	2	Lexington	4
Charleston	9	Marlboro	4
Cherokee	3	Marion	4
Chester	4	Newberry	4
Chesterfield	3	Oconee	3
Clarendon	4	Orangeburg	5
Colleton	4	Pickens	3
Darlington	4	Richland	5
Dorchester	2	Saluda	3
Edgefield	3	Sumter	4
Fairfield	4	Spartanburg	7
Florence	4	Union	3
Georgetown	3	Williamsburg	4
Greenville	6	York	5

PRESCRIBED COURSE OF STUDY

As briefly described and tabulated on the following pages, seven regular four-year courses are offered, each leading to graduation with the degree of Bachelor of Science (B. S.,) the course pursued being designated on the diploma.

The three agricultural courses are alike in the freshman and sophomore years, and agricultural students are, therefore, required to choose between these at the beginning

of the junior year. The other four courses are alike during the first two years, and choice between them is made at the beginning of the junior year. The descriptions accompanying the detailed schedules of studies in the various courses are intended to aid the student in arriving at an adequate estimate of the scope and purposes of each course, in order that he may the more intelligently choose between them.

COURSE I. AGRICULTURE

This is a broad educational course, covering the whole field of natural sciences that are tributary to the agricultural industry, together with a liberal amount of mathematics, English, physics, history and political economy, and a maximum amount of chemistry.

This division of the original course into (1) Agriculture (2) Agriculture and Chemistry, and (3) Agriculture and Animal Industry, described on the following pages, has been made in order to afford opportunity for election in these lines. In this course the student is given more special training in agriculture, horticulture, chemistry, botany, bacteriology and entomology; and thus is laid a foundation upon which he may readily specialize in any of these branches after graduation. The student is well equipped to take up farming, gardening, or fruit-growing as an occupation, or for the pursuit of investigational work in the United States Department of Agriculture or the various State Experiment Stations.

Each of the agricultural courses forms an excellent foundation for the study of other professions, particularly that of medicine.

COURSE I. AGRICULTURE**Freshman Class.**

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243) ..	2	2	2
Agriculture (100)	2	0	0	Forge Work (252)	3	2	2
Botany (171)	0	2	2	Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (531)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	3	3	3
Agriculture (101)	0	2	2	Botany (172)	3	0	0
Physics (231-233)	2	3	3	Agriculture (101)	0	4	4
Civil Engineering (531)	0	2	2	Physiography (117)	3	0	0
Zoology & Entomology (140)	0	2	2	Military Drill (602)	3	3	3
Botany (172)	2	0	0				

Junior Class.

English (503)	2	2	2	Chemical Lab. (303, 305)	3	3	3
History (514)	2	2	2	Horticulture (121)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102)	0	2	3
Horticulture (120)	2	0	2	Dairying (162)	3	3	0
Animal Husbandry (150-152)..	0	2	2	Forestry (173, 175)	4	0	0
Dairying (161)	2	2	0	Animal Husbandry (154)	0	0	4
Agriculture (102)	0	2	2	Veterinary Science (130-131) ..	0	4	0
Veterinary Science (130-131) ..	2	2	2	Military Drill (602)	3	3	3
Forestry (173)	2	0	0				
Military Science (600)	1	1	1				

Senior Class.

Political Economy (515)	3	2	0	Agriculture (103-105)	4	4	3
English (504)	0	2	3	Horticulture (122)	2	2	3
Agriculture (103-105)	3	3	2	Animal Husbandry (160)	2	3	3
Animal Husbandry (157, 153).	2	2	2	Bacteriology (142)	0	3	3
Horticulture (122)	2	2	3	Botany (176)	4	0	0
Geology (111-112)	2	3	2	Military Drill (602)	3	3	3
Botany (176)	2	0	0				
Bacteriology (142)	0	2	2				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY.

This is a differentiation of the original Course in Agriculture for the purpose of affording students specially interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential, studies have been omitted. English, history and civics are retained throughout the course. Drawing the first year, physics the second year, geology the last year, and chemistry the last three years, but slightly reduced and changed to meet the demands of this new course. Botany, bacteriology, zoology and entomology are so planned as to begin the first year of the course and thereby contribute to clearer knowledge of farm crops, live stock, dairying, sanitation and animal disease. General agriculture is taught during the first two years, horticulture the third and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breed of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding, care and management of flocks and herds. In the dairy course are taken up the production, handling, manufacture and marketing of whole milk, cream, ice-cream, butter and cheese.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY.

Freshman Class

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	0	0	Forge Work (252)	3	2	2
Botany (171)	0	2	2	Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (531)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	3	3	3
Agriculture (101)	0	2	2	Botany (172)	3	0	0
Physics (231-233)	2	3	3	Agriculture (101)	0	4	4
Civil Engineering (531)	0	2	2	Physiography (117)	3	0	0
Zoology & Entomology (140)	0	2	2	Military Drill (602)	3	3	3
Botany (172)	2	0	0				

Junior Class.

English (503)	2	2	2	Chemical Lab. (303, 305)	3	3	3
History (514)	2	2	2	Horticulture (121)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102)	0	2	3
Horticulture (120)	2	0	2	Dairying (162)	3	3	0
Animal Husbandry (150-152)	0	2	2	Forestry (173, 175)	4	0	0
Dairying (161)	2	2	0	Animal Husbandry (154)	0	0	4
Agriculture (102)	0	2	2	Veterinary Science (130-131)	0	4	0
Veterinary Science (130-131)	2	2	2	Military Drill (602)	3	3	3
Forestry (173)	2	0	0				
Military Science (600)	1	1	1				

Senior Class.

Political Economy (515)	3	2	*0	Animal Husbandry (160)	3	3	3
English (504)	0	2	*3	Veterinary Science (136)	3	3	3
Animal Husbandry (157,155,153)	4	2	2	Bacteriology (143)	0	2	3
Veterinary Science (134-135)	2	2	3	Dairying (162)	2	0	0
Geology (111-112)	2	3	2	Agriculture (103-105)	4	4	3
Agriculture (103-105)	3	3	2	Military Drill (602)	3	3	3
Bacteriology (142)	0	2	2				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

COURSE III. AGRICULTURE AND CHEMISTRY.

This is a differentiation of the original course in Agriculture for the purpose of affording students specially interested in chemistry, mineralogy and bacteriology an opportunity to receive more instruction in these subjects than is offered by the other agricultural course. There is a growing demand for well-trained chemists, and the students who propose to select the profession of chemistry will find that this course is well arranged to give them a good foundation in the science and at the same time furnish them a liberal education.

COURSE III. AGRICULTURE AND CHEMISTRY.

Freshman Class.

Hours per week			Hours per week		
First term	Second term	Third term	First term	Second term	Third term
THEORETICAL			PRACTICAL		
Mathematics (520-521)	5 5 5		Wood Work (271)	3 2 2	
English (501)	5 5 5		Freehand Drawing (240)	2 2 2	
History (511-513)	3 3 3		Mechanical Drawing (243)	2 2 2	
Agriculture (100)	2 0 0		Forge Work (252)	3 2 2	
Botany (171)	0 2 2		Botany (171)	0 2 2	
			Bookkeeping (540)	2 2 2	
			Military Drill (602)	3 3 3	

Sophomore Class.

Mathematics (522)	5 0 0	Chemistry (301)	3 3 3
English (502)	3 3 3	Civil Engineering (531)	0 2 2
Chemistry (300)	3 3 3	Zoology & Entomology (140)	3 3 3
Agriculture (101)	0 2 2	Botany (172)	3 0 0
Physics (231-233)	2 3 3	Agriculture (101)	0 4 4
Civil Engineering (531)	0 2 2	Physiography (117)	3 0 0
Zoology & Entomology (140)	0 2 2	Military Drill (602)	3 3 3
Botany (172)	2 0 0		

Junior Class.

English (503)	2 2 2	Chemistry (303)	6 6 6
History (514)	2 2 2	Mineralogy (111)	0 2 2
Chemistry (304)	2 2 2	Forestry (173, 175)	4 0 0
Mineralogy (111)	2 2 2	Horticulture (121)	2 0 2
Botany (172)	2 0 0	Agriculture (102)	0 2 2
Horticulture (120)	2 0 2	Dairying (162)	0 2 0
Agriculture (102)	0 2 2	Military Drill (602)	3 3 3
Dairying (161)	2 2 0		
Animal Husbandry (150-152)	0 2 2		
Forestry (173)	2 0 0		
Military Science (600)	1 1 1		

Senior Class.

Political Economy (515)	3 2*0	Chemical Lab. (305)	6 6 6
English (504)	0 2*3	Horticulture (122)	2 0 3
Chemistry (302)	2 2 2	Bacteriology (142)	0 3 3
Horticulture (122)	2 0 3	Animal Husbandry (160)	0 3 0
Agriculture (103-105)	3 3 0	Botany (176)	4 0 0
Geology (111-112)	2 3 2	Military Drill (602)	3 3 3
Bacteriology (142)	0 2 2		
Botany (176)	2 0 0		
Animal Husbandry (157, 153)	0 2 2		
Military Science (601)	1 1 1		

*Political Economy ends and Senior English begins at middle

COURSE IV. CHEMISTRY AND GEOLOGY.

This course is intended to equip the student for engaging in manufacturing operations involving metallurgy or other branches of inorganic chemistry, or for employment as assayer or chemist in connection with mining operations. It also furnishes a basis upon which he may readily specialize in mining or geology, with a view to conducting actual mining enterprises or to employment in responsible positions on state or national surveys.

The student is well grounded in the principles of chemistry, physics, mechanics, geology and mineralogy, but the principal stress is laid on geology and metallurgical chemistry. He also acquires a valuable practical knowledge of surveying, mechanical engineering, foundry practice, drawing and designing, in addition to the pursuit of courses in English, history, political economy, and other subjects of general educational value.

The first two years of the course are the same as in the engineering courses. The third and fourth years differ chiefly in the substitution of advanced work in chemistry and metallurgy, and in geology and mineralogy for technical engineering work.

COURSE IV. CHEMISTRY AND GEOLOGY.

Freshman Class.

Hours per
week
First term
Second term
Third term

Hours per
week
First term
Second term
Third term

THEORETICAL

Mathematics (520-521)	5	5	5
English (501)	5	5	5
History (511-513)	3	3	3
Agriculture (101)	2	2	2

PRACTICAL

Wood Work (270)	3	3	3
Freehand Drawing (240)	3	3	3
Mechanical Drawing (242)	3	3	3
Forge Work (250)	3	3	3
Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522, 4-5)	5	3	3
English (502)	3	3	3
History (514)	2	2	2
Chemistry (300)	3	3	3
Physics (230)	0	2	2
Civil Engineering (531)	0	2	2

Foundry (251)	2	3	3
Pattern Making (272)	2	3	3
Mechanical Drawing (284)	2	2	2
Chemical Laboratory (301)	3	2	2
Descriptive Geom. (530)	3	0	0
Civil Engineering (531)	0	2	2
Military Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	4	4	4
English (503)	2	2	2
Chemistry (306)	2	2	2
Mineralogy (111)	2	2	2
Physics (231)	2	2	2
Mechanism (220)	2	0	0
Mechanics (221)	0	2	2
Military Science (600)	1	1	1

Assaying (303)	2	2	2
Chemical Lab. (303)	4	4	4
Mineralogical Lab. (111)	2	2	2
Mechanical Drawing (247)	2	2	2
Physical Lab. (232)	2	2	2
Military Drill (602)	3	3	3

Senior Class.

English (504)	0	2	3
Political Economy (515)	3	2	0
Chemistry (302)	2	2	2
Metallurgy (310)	2	2	2
Economic Geology (115)	2	3	4
Petrography (114)	2	2	3
Mechanical Eng. (213)	3	3	0
Military Science (601)	1	1	1

Chemical and Metallurgi- cal Laboratory (311)	6	6	6
Practical Geology (116)	3	3	3
Mechanical Lab. (215)	3	3	3
Military Drill (602)	3	3	3

*Political Economy ends and Senior English begins at middle of second term.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING.

This course is designed to fit young men for positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually distances his uneducated competitors in the acquirement of practical knowledge and experience.

Within the department are taught physics, mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in well equipped laboratories.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the course.

Graduates from this course are filling responsible positions in various lines mechanical and electrical engineering and in drawing.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING.

Freshman Class.

	Hours per week				Hours per week		
	First term	Second term	Third term		First term	Second term	Third term
THEORETICAL				PRACTICAL			
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511, 513)	3	3	3	Mechanical Drawing (242) ...	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)....	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (230)	2	2	2	Descriptive Geom. (530)	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Military Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	5	5	5	Mechanical Drawing (245)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (231)	2	2	2	Physical Lab. (232)	3	3	0
Electrical Eng. (200)	3	3	3	Electrical Lab. (201)	3	3	3
Mechanism (210)	2	0	0	Mineralogical Lab. (111)	0	0	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class.

English (504)	0	2*	3	Machine Shop (261)	3	2	0
Political Economy (515)	3	2*	0	Drawing & Designing (238)...	3	3	3
Electrical Eng. (202)	5	5	5	Electrical Lab. (203)	3	3	3
Mechanical Eng. (213)	3	3	5	Mechanical Lab. (214)	3	3	6
Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term. Other practical work may be substituted.

COURSE VI. CIVIL ENGINEERING.

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics and the physical sciences. The course will also be found to embrace about the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets, and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

For fuller details, see descriptions of instruction in these subjects.

COURSE VI. CIVIL ENGINEERING.

Freshman Class.

Hours per			Hours per		
	First term	Second term	First term	Second term	Third term
THEORETICAL			PRACTICAL **		
Mathematics (520, 521)	5	5	5	3	3
English (501)	5	5	5	3	3
History (511-513)	3	3	3	3	3
Agriculture (101)	2	2	2	3	3
			Wood Work (270)	3	3
			Freehand Drawing (240)	3	3
			Mechanical Drawing (242) ..	3	3
			Forge Work (250)	3	3
			Military Drill (602)	3	3

Sophomore Class.

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244a)...	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)...	3	2	2
Physics (230)	2	2	2	Descriptive Geometry (530)...	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Military Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	5	5	5	Mechanical Drawing (246) ..	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (231)	2	2	2	Physical Lab. (232)	3	3	0
Civil Engineering (532, 534) ..	3	3	3	Civil Eng. Field (532, 534)	3	3	3
Mechanism (210)	2	0	0	Mineralogical Lab. (110)	0	0	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class.

English (504)	0	2	3	Machine Shop (261)	3	3	0
Political Economy (515)	3	2	0	Drawing & Designing (249)...	3	3	3
Civil Engineering (535)	5	5	5	Mechanical Lab. (214)	3	3	3
Mechanical Eng. (213)	3	3	5	Civil Eng. Field (536-538)	3	3	6
† Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

**Other practical work may be substituted.

†Practical Electrical Engineering may be given in place of 2nd term Mechanics.

COURSE VII. TEXTILE INDUSTRY.

The Course in Textile Industry is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. The curriculum of the course recognizes that in a profession of so many aspects a broad general cultivation, a liberal training in design, and a thorough knowledge of the underlying principles are necessary for its successful practice.

The first two years are taken up with a broad general training along scientific and mechanical lines, while from the beginning of the Junior year the work takes on a distinctly professional character. The practical work is carried on for the purpose of developing in the student habits of accurate observation, and of bringing to his consideration not only methods of fundamental importance, but questions of economy of time, precision of results, and attention to details. Effort is made to develop self-reliance in the student, so that he may be fitted to make his way without assistance.

This course does not presume to fit one for the management of a mill, but the graduate is in possession of such information, and has acquired such experience and knowledge that he may look forward to a successful career as manufacturer, mill architect or technical chemist, provided he has the necessary energy, application and tact, and a willingness to begin at the bottom.

COURSE VII. TEXTILE INDUSTRY**Freshman Class.**

	Hours per week				Hours per week		
		Third Second First term				Third Second First term	
THEORETICAL				PRACTICAL			
Mathematics (520-521)		5 5 5		Wood Work (270)		3 3 3	
English (501)		5 5 5		Freehand Drawing (240)		3 3 3	
History (511-513)		3 3 3		Mechanical Drawing (242)		3 3 3	
Agriculture (101)		2 2 2		Forge Work (250)		3 3 3	
				Military Drill (602)		3 3 3	

Sophomore Class.

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244).....	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (230)	2	2	2	Descriptive Geometry (230) ..	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Drill (602)	3	3	3

Junior Class.

Mathematics (525-527)	5	5	5	Machine Shop (260)	3	3	3
English (503)	2	2	2	Chem. Lab. (303)	3	3	0
Textile Chemistry (420)	1	1	2	Dyeing Lab. (420)	0	0	3
Designing (412)	2	2	2	Weaving (410-411)	3	3	3
Carding and Spin'g (400-406)..	2	2	1	Carding and Spin'g (400-406)..	3	3	3
Mechanism (210)	2	0	0	Military Drill (602)	3	3	3
Mechanics (211)	0	2	2				
Military Science (600)	1	1	1				

Senior Class.

English (504)	0	2	*3	Mechanical Lab. (215)	0	3	3
Political Economy (515)	3	2	*0	Cam. Drawing (249a)	2	0	0
Mechanical Eng. (213)	3	3	0	Carding and Spin'g (400-406)..	3	3	3
Carding and Spin'g (407-409)..	2	2	2	Dyeing (421)	3	3	3
Textile Chemistry (421)	2	2	2	Weaving (410-411)	4	3	3
Designing (412)	2	2	2	Military Drill (602)	3	3	3
Cloth Analysis (414)	1	2	2				
Weaving (410-411)	1	1	1				
Jacquard Designing (413)	0	0	2				
Military Science (601)	1	1	1				

*Political Economy ends and Senior English begins at middle of second term.

Special Courses

Besides students in the regular undergraduate courses there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of the uniform and board in barracks.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical.

No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on elementary mechanical drawing physics and chemistry, and on mathematics through plane trigonometry. They will be expected to take with the *junior class*, in addition to their electrical studies, physics,

mechanics, mathematics, mechanical drawing and machine shop work. Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the *senior class*, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing, and machine design.

Students who are not prepared, or willing to take the other subjects necessary to successful study of electrical engineering, will not be permitted to take a special course in this line.

Special Cotton Grading Course

This course begins with the winter term, January 5, 1911, and continues for six weeks. All of the important cottons of the world are studied, but most of the practice is with the varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. The students are given the results of experiments made by the textile students with various grades.

Elementary bookkeeping and warehouse accounting are included in this course.

Text-books:—Dabney's "The Cotton Plant;" C. P. Brooks' "Cotton."

Special Textile Course

To meet the demands of southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course, as scheduled and described on the preceding pages.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, and is thoroughly practical and allows a greater portion of the student's time to be devoted to the pursuit of textiles in its several branches.

To pursue this course successfully the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 14 to 17, 1910, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. They will not be required to perform military duty, but will be subject to the general rules and regulations of the College. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

COURSE OF STUDY

FIRST YEAR.	Hours Per Week.		
	1st term.	2nd term.	3rd term.
	Week.	Week.	Week.
Mathematics (begins Algebra).....	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)....	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Freehand Drawing.....	3	3	3
	—	—	—
	30	30	30

SECOND YEAR.

Mathematics (complete Geometry)..	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory).....	2	2	2
Carding and Spinning (practical)....	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Design- ing	2	3	3
Weaving	5	8	8
	—	—	—
	30	30	30

Special Post Graduate Textile Course

This course is, in general, a continuation of the regular course with the addition of such subjects as will lead to a proper understanding of industrial affairs. Frequent discussion of the subjects treated, and wide reading on assigned topics will be special features of the course. The subjects taken up will include combing, mule spinning, mill construction and organization, assembling of machinery, Jacquard weaving, building of Jacquard harnesses, loom fixing, designing, dyeing, manufacture and technical analysis of chemicals and other products used in the textile industry, and sociology in so far as it touches upon mill life, welfare work and labor problems.

Short Course in Agriculture

For the benefit of any person in the state who wishes to avail himself of the latest thought concerning practical agriculture a short course is offered beginning immediately after the Christmas holidays and continuing six weeks. In scope this course will cover the whole field of agriculture in so far as is practicable in the time and will include the following subjects:

AGRONOMY

Soils. Fertilizers. Manures. Tillage. Implements and machinery. Crop rotation. Corn. Cotton. Forage crops.

ANIMAL INDUSTRY

Breeds of stock. Handling and care of animals. Feeds and feeding. Judging live stock.

DAIRYING

Breeds of dairy cattle. Feeding. Judging dairy cows. Barn and silo construction. The making of butter. The testing of milk. Sale of dairy products.

HORTICULTURE

The home garden and orchard. Propagation of plants. Beautifying the home grounds.

Lectures will be given on the Common Diseases of Live Stock, Sanitation on the Farm, Prevention of Disease, Injurious Insects and Remedies for same, Meteorology and Farm Management. An opportunity will be given to study the grading and classification of cotton in the course given by the Textile Department of the College.

Those who are specially interested in one or more subjects will be offered every facility to put their whole time on these particular subjects. The whole equipment of the Agricultural Department, as described elsewhere in this catalogue, will be available for use in this course.

Irregular Courses

Every student is required to pursue one of the regular courses, as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.

2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Courses

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home then he must stand his examination for one of the College classes, and failing to pass the required examination for the Freshman class, will not be allowed to enter the preparatory class, but must return home.

The instruction in this department is under the immediate supervision of the professor of English, mathematics, history, and geology in the College, and is closely articulated with the work of the advanced classes.

The course of study is as follows:

Arithmetic, 5 hours a week.

Algebra, 5 hours a week.

Grammar and Composition, 5 hours a week.

Reading and Spelling, 5 hours a week.

Geography, 2 hours a week.

History, 3 hours a week.

Students who satisfactorily complete this course will be

advanced to the Freshman class. Those who fail to pass to the higher class may review the course the next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the Freshman class.

Degrees, Medals and Honors.

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make an average grade of 90 per cent. or over for any session are designated as *distinguished*; provided, however, that the minimum grade on any subject shall not be less than 80 per cent. Their names are published in the Catalogue of the succeeding year. This honor was won in 1909 by G. W. Keitt of the Senior class.

Trustees' Medal.—The Board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1909 by T. B. Reeves '09.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won in 1910 by C. F. Inman, '10,

Calhoun; O. F. McCreary, '12, Columbian; W. D. Barnett, '10 Palmetto.

In oratory, by W. J. Marshall, '10, Calhoun; N. E. Byrd, '10, Columbian; H. C. Twiggs, '10, Palmetto.

In declamation, by B. F. Dick, '13 Calhoun; F. H. All, '11, Columbia; W. A. Barnette, '10, Palmetto.

The Chronicle Medals.—*The Chronicle* the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

A Blue Silk C. A. C. Flag is awarded June of each year to the best drilled company, and carried by it during the succeeding year. This was won in June, 1909, by Company "A", L. P. Byars, Captain.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1909, by Cadet R. H. Walker, '11.

Norris Medal.—"I give \$500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it '*Honores habet onus*' (Honors bring responsibilities)."

The medal was awarded in 1909 to G. W. Keitt.

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the *Official Army Register* of the succeeding year.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States Army.

Second Lieutenancy United States Army.—General Orders, No. 39, War Department, contains the following paragraph:

“The reports of the regular inspections of the colleges and schools to which officers of the army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the general staff for its critical examination, and the chief of staff will report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in the regular army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men.”

The term “honor graduate” signifies any graduates who would rank as one of the first five of his class.

DETAILED DESCRIPTION OF COURSES.

1. Agricultural Department

Agronomy (100-108).
Geology and Mineralogy (110-117).
Horticulture (120-122).
Veterinary Science (130-137).
Zoology and Entomology (140-144).
Dairying and Animal Husbandry (150-162).
Botany and Forestry (170-176).
Bookkeeping (540).

2. Engineering Department

Electrical Engineering (200-203).
Mechanical Engineering (210-215).
Civil Engineering (530-538).
Physics (230-232).
Drawing and Designing (240-249a).
Forge and Foundry Work (250-252).
Machine Work (260-261).
Woodwork (270-272).

3. Chemical Department

Chemistry (300-306).
Metallurgy (310-311).

4. Textile Department

Carding and Spinning (400-409).
Weaving and Designing (410-414).
Textile Chemistry and Dyeing (420-421)

5. Academic Department

English (500-504).
History and Political Economy (510-515).
Mathematics (520-527).
Modern Languages (550-556).

6. Military Department

Military Science and Tactics (600-602).

AGRICULTURAL DEPARTMENT.

Professor Perkins, Director.

Agronomy.

Professor Perkins.

Assistant Professor Napier.

Freshman Class; First Term.

100. *Elementary Agriculture.*

This course will be given by lectures, with a text-book as a guide, and will cover the field of agricultural practice as far as possible, with special reference to South Carolina farming.

101. *Farm Mechanics.*

Sophomore Class; Second and Third Terms.

Courses I, II, and III.

A detailed study of the farm implements, the history of their development, material of which manufactured, work accomplished. The object of this course is to familiarize the students with the latest improvements in farm machinery and especially to impress upon them the saving of labor effected by its use. This will be given both in field and in laboratory.

102. *Soil Physics.*

Junior Class; Second and Third Terms.

Courses I, II, and III.

A laboratory and field course in soil physics, conditions influencing the physical condition of soils, their texture and behavior under certain management.

103. *Soil Fertility.*

Senior Class; First Term.

Courses I, II and III.

A study of the plant food requirements of soils, farm manures, commercial fertilizers and crop rotations in their relations to soil fertility, with practical work in the field and laboratory.

104. *Farm Crops.*

Senior Class; Second Term.

Courses I, II, and III.

A course in the study of the staple crops, legumes and grasses; their growing and handling. The breeding of common field crops. Seed testing and corn judging.

105. *Farm Management.*

Senior Class; Third Term.

Courses I, and II.

This course will include such topics as "the choice of lands

for farming;" "location and character of buildings;" kinds of farming;" "methods of controlling labor;" "stocking a farm" and other economic questions affecting southern agriculture.

Geology and Mineralogy.

Professor Calhoun.

110. *Elementary Mineralogy.*

Junior Class; Course V, VI.

Laboratory study of crystal forms by the use of models and natural crystals; chemical and physical properties of minerals; practice in the determination of unknown specimens. This is a brief course, intended to give the student an adequate conception of the science of mineralogy together with some practical acquaintance with the more common and important minerals.

111. *Mineralogy.*

Junior Class; Courses II, IV.

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to readily identify all but the rarer minerals.

112. *Elementary Geology.*

Senior Class; Courses I, II, III, V, VI.

The elements of dynamical, structural and historical geology. The influences of geologic phenomena on man are emphasized, particularly in the study of rock-decomposition and the formation of soils, the processes of erosion and deposition, and the resultant topographic forms.

113. *General Geology.*

Junior Class; Course IV.

A broad course in the elements of general geology. Special stress is laid on structural and dynamical geology in their relations to the formation of rocks and rock-structures, the metamorphism of rocks, and the deposition of minerals and ores. In historical geology special attention is given to the development of the North American continent.

114. *Economic Geology.***Senior Class; Course IV.**

A general survey of geological products of value, including metallic and non-metallic minerals, and building stones; their origin and nature, distribution, modes of occurrence, and methods of exploitation. The course deals particularly with the economic deposits of North America, with briefer reference to those of other countries for purposes of comparison and for the elucidation of problems of origin, exploitation, etc. The student

115. *Practical Geology.***Senior Class; Course IV.**

Field study and reports of geological process and phenomena, rocks and rock-structures, both original and secondary, accompanied by laboratory exercises by means of specimens, models, photographs, maps and sections; interpretation and representation of geologic phenomena, and training in the principles and methods of geological surveying, the construction of geological maps and sections, and the preparation of reports.

117. *Physiography.***Sophomore Class; Courses I, II, III.**

A laboratory course designed to give the student an adequate conception of the use of meteorological instruments, weather maps, soil making minerals and rocks, soil types of the state, and various other elementary meteorological and geological principles.

For description of equipment, see page 34.

Horticulture.*Associate Professor Mooring.*

Instruction is given in the Junior and Senior Classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. These practical exercises enable the student to become familiar with all details of the work.

120. *Propagation and management of Nursery Stock.***Junior Class; Courses I, II, III.**

Lectures are given on the following subjects and special attention is paid to the practical work along these lines. Stratification of seeds, sowing seeds, seed testing, separation and division, budding and grafting, grading and storing nursery stock, nursery management.

121. *Vegetable Gardening.***Junior Class; Courses I, II, III...**

Construction of hot-beds and cold-frames, their use and management; preparation of the soil; fertilizing; seed sowing; transplanting and cultivation; gathering; storing and marketing; spraying and spraying equipment.

Text-book: *Principles of Vegetable Gardening*, by L. H. Bailey.

122. *Ornamental Horticultural and Floriculture.***Senior Class; Courses I, II.**

The work includes ornamental horticulture and floriculture, the propagation and care of ornamental plants; general greenhouse work and management.

For description of buildings, grounds, and equipments, see page 36.

Veterinary Science.*Associate Professor Powers.**Assistant Feeley.*130. *Veterinary Anatomy.***Junior Class; Course I, II.**

An elementary course including study of the skeleton, principal articulations, muscles of locomotion, etc., arranged as an introduction to the study of the principles of stock judging and physiology.

131. *Physiology.***Junior Class; Course I, II.**

In this course the physiology of the circulatory, respiratory, digestive, urinary and generative organs; the lymphatic circulation and nervous system.

Text-book: "H. N. Martin's "Human Body."

133. *Physiological Demonstrations.*

A laboratory course in chemical physiology.

Junior Class; Course I, II.

Text-book: Piene A. Fish's "Exercises in Physiology."

134. *Sporadic Animal Disease.***Senior Class; Course II.**

A brief course in the non-contagious diseases of farm animals, special attention being given to cause and prevention.

135. *Contagious Animal Diseases.*

Senior Class; Course II.

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission, symptoms, cause, prevention, and treatment of the diseases common to man and animals are studied. Especial attention is given to the contagious diseases most common in this state.

136. *Veterinary Clinics.*

Senior Class; Course II.

A free clinic is held at the veterinary hospital every Monday afternoon of the session, except on holidays and during examinations. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in the surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

Zoology, Entomology and Bacteriology.

Assistant Professor Ainslie.

Instruction work in this division is carried on by means of lectures and recitations supplemented by laboratory work and outside investigation and experimentation. So far as practicable especial stress is laid on the economic aspect of subjects treated.

140. *General Zoology.*

Sophomore Class; Courses I, II, III.

This course covers two terms, the first of which is spent in laboratory work covering the lower forms of animal life and laying a foundation for the second. The second term's work consists of both laboratory and class room exercises. The text book is used in connection with lectures to gather the facts observed in the laboratory work into a general view of the development of the animal kingdom. So far as possible, animals of economic importance are used as types.

141. *Economic Entomology.*

Sophomore Class; Courses I, II, III.

The third term of the year, following Zoology, is taken up with a more detailed study of the insects than is possible in that course. The insects of economic importance in the South are studied individually as well as the preparation and use of insecticides and other preventive and remedial measures. Upon completion of this course the student is able to determine for

himself the best means of combating the insects which trouble the farmer and fruit grower.

142. *Introductory Bacteriology.*

Senior Class; Courses I, II, III.

A brief study of the general character, habits and work of bacteria is followed by practical work in growing, mounting and determining them. Soil and dairy bacteria are given special attention. The principal bacterial contagious diseases and methods of prevention are considered briefly in the class work.

143. *Animal Bacteriology.*

Senior Class; Courses I, II, III.

This course treats of dairy bacteriology more in detail, and in addition some time is spent in the study of disease producing forms. The principal contagious bacterial diseases of animals are studied. This course is open only to those who have completed the introductory course in Bacteriology.

Animal Husbandry and Dairying.

Associate Professor Nourse.

Assistant Professor Burgess.

150. *Types of Cattle, Horses, and Mules.*

Junior Class; Courses I, II, III.

Market and breed types of dairy and beef cattle; their origin and history. Types and breeds of horses and mules.

152. *Types of Sheep and Hogs.*

Junior Class; Courses I, II, III.

Breed and market types of sheep and hogs; their origin and history.

153. *Principles of Breeding.*

Senior Class; Courses I, II, III.

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding, in and in breeding; line breeding, etc.

154. *Stock Judging and Pedigree work.*

Junior Class; Courses I, II, III.

Judging dairy and beef cattle, sheep, hogs, horses, and mules, and score-card practice.

155. *Care and Management of Farm Animals.*

Junior Class; Course II.

Care and management, housing and feeding farm animals.

157. *Stock Feeding.*

Senior Class; Courses I, II, III.

Stock feeding, including composition and digestibility of feeding stuffs; their preparation, use and cost; nutritive ratio; digestion, etc. The available food stuffs of the South are discussed at length.

160. *Compounding Rations.*

Senior Class; Courses I, II, III.

161. *Milk and its Products.*

Junior Class; Courses I, II, III.

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pasteurization; milk testing; dairy machinery; manufacture of butter, cheese and ice cream and marketing.

162. *Practical Work in Creamery.*

Junior Class; Courses I, II, III.

Cream separation and ripening; pasteurization of milk and cream; bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

Botany and Forestry.

Associate Professor Knight.

171. *General Botany.*

Freshman Class; Courses I, II, III.

A preliminary course in general botany. A morphological study of types of Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms. The work is largely microscopical, though the students have access to a very full line of preserved botanical material when the course demands its use.

Text-book: Bergen and Davis' "Principles of Botany."

172. *Biological Preparations.*

Sophomore Class Courses, I, II, III.

A course giving the latest and most approved methods of preserving all kinds of plant and animal material. This work includes the preparation of museum, and herbarium specimens, and the methods of killing, fixing, embedding, staining and mounting all kinds of biological material for microscopic study. Special attention is given to the technique of plant diseases.

Text-book: Chamberlain's Methods.

173. *Plant Physiology.*

Junior Class; Courses I, II, III.

A laboratory course designed to illustrate the functions of various parts of plants and their relation to light, heat, moisture, soils, etc., with the chemical and physical processes involved in their development and death.

Text-book: Ganong's Plant Physiology.

174. *Systematic Botany.*

Sophomore Class; Courses I, II, and III.

A course in the taxonomic and ecological features of this region with a laboratory and field study of the main types of Angiosperms. From 50 to 100 plants are here identified and classified.

Text-book: Gray's New Manual of Botany.

175. *Elements of Forestry.*

Junior Class; Courses I, II, III.

A lecture, field, and laboratory course dealing with the general principles of forestry, together with the practical methods applied in lumbering, forest propagation and conservation.

Text-book: Green's Principles of American Forestry.

176. *Plant Pathology.*

Senior Class; Courses I, III.

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed.

ENGINEERING DEPARTMENT.

Professor Riggs, Director.

Electrical Engineering.

Professor Riggs.

Assistant Professor Dargan.

200. *Electricity and Magnetism.***Junior Class, Course V.**

Principles of Electricity and Magnetism, instruments, wiring calculations, incandescent lighting, direct current motors and generators, etc.

Text-books: Thompson's "Elementary Lessons in Electricity and Magnetism." Jackson's "Elementary Electricity and Magnetism." Riggs and Dargan's "Mimeographed Notes and Problems."

201. *Electrical Laboratory.***Junior Class, Course V.**

Experimental verification of the fundamental laws of Electricity and Magnetism, including the measurement of current, resistance, electromotive force, capacity, permeability, the tests and calibration of instruments, operation of direct current motors and generators, etc.

Text-book: Riggs, Kyser and Dargan's "Electrical Laboratory Experiments."

A number of the best books on laboratory practice are available for reference.

The student is required to study the theory as well as the manipulation of the experiments, and to express his complete study of each experiment in a carefully prepared written report.

202. *Dynamo Electric Machinery.***Senior Class; Course V.**

First Term: Study and design of direct current dynamo-electric machinery. Second and third terms: Study of alternating currents and their application to light and power. Special attention is directed to polyphase system and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineering; Franklin's Alternating Currents and Alternating Current Machinery; Riggs' Dynamo Design.

Note.—A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Engineering, and Course 238 in Mechanical Drawing.

203. *Electrical Laboratory.*

Senior Class; Course V.

Care, management and testing of arc and incandescent generators, direct current generators, motors and of single and poly-phase machinery and apparatus.

Text book: Riggs' Electrical Engineering Experiments.

For description of buildings and equipment, see page 39.

Mechanical Engineering.

Associate Professor S. B. Earle.

210. *Mechanism.*

Junior Class; Course IV. V, VI, VII.

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicyclic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-book: Stahl and Wood's Mechanism.

211. *Mechanics.*

Junior Class; Courses IV, V, VI, VII.

Motion, force, velocity, force system, moments of force, general principles and methods of solving problems both analytically and graphically.

Text-book: Maurer's Technical Mechanics.

212. *Mechanics.*

Senior Class; Courses V, VI.

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Maurer's Technical Mechanics.

Note: Two hours practical Electrical Engineering may be given in place of second term Mechanics.

213. *Mechanical Engineering.*

Senior Class; Courses IV, V, VI, VII.

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; transmission of power; specifications and the law of contracts. Theory of the strength of engineering materials. Graphical and analytical solution of problems.

Text-book: Creighton's Steam Engine and Other Heat Motors.

214. *Mechanical Laboratory.*

Senior Class; Courses V, VI.

Study, use and calibration of water-meters, wiers, steam gauges, indicators, dynamometers, calorimeters; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; setting the valves of the plain slide-valve and automatic cut-off steam engines; indicator practice; horse-power and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

215. *Mechanical Laboratory.*

Senior Class; Courses IV, VII.

Study, use and calibration of steam gauges; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; setting the valves of plain slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps, firing and testing of steam boilers.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

Civil Engineering.

Professor Houston.

Assistant Professor Sweeny.

530. *Descriptive Geometry.*

Sophomore Class; Courses IV, V, VI, VII.

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive Geometry.

531. *Plain Surveying.*

Sophomore Class; All Courses.

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the areas are computed and plats are drawn. Experience is given in problems of laying out and dividing up land, and in

locating irregular boundaries. Practice is also had in section and differential leveling.

Text-book: Breed and Hosmer's Vol. 1. Principles and Practice of Surveying.

532. *Higher Surveying.*

Junior Class; Course VI.

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; geodetic surveying; map and plan drawing; topographical symbols; photographic surveying, etc.

Text-book: Breed and Hosmer, Vol. I. Principles and Practice of Surveying.

533. *Railway Engineering.*

Junior Class; Course VI.

Preliminary and location surveys; location from contour maps; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches, turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

534 *Rural Engineering.*

Junior Class; Courses I, II.

This course is arranged with special view to the needs of the agricultural students. Among the subjects taught are: Farm surveying; laying out and dividing up land; land drainage, including surface-drainage; under-drainage, and hillside ditching and terracing. Road engineering, a practical course in road-making and maintenance, with special reference to conditions in South Carolina. The principles underlying grade and surface resistance, drainage, surfacing, and the best methods of construction are carefully studied. The instruction in the classroom is supplemented by a liberal amount of field practice.

Text-book: Gillespie's Manual of Road-Making; Elliott's Farm Drainage.

535-538 *General Civil Engineering.*

Senior Class, Course VI.

This course includes a study of building materials, mechanics of construction, derivation of practical formulas, masonry construction, foundations on land and in water, stability of walls and arches, analytical investigation of stresses in various forms of roof trusses and bridges, the field and office work in railroad construction, location and construction of country roads and city pavements, hydrostatics, motion of water in pipes and channels, determinations of discharge of streams by current meter and weirs, water power developments, water supply and the dis-

posal of sewage. In addition, the student is required to hand in a thesis on some engineering work. This necessitates additional field work, and outside study. The College Library furnishes valuable books of reference.

Text-books: "Fiebeger's Civil Engineering." Merriman and Jacoby's "Roofs and Bridges." Vol. I. Webb's "Railway Construction."

Physics.

Associate Professor Poats.

The study of physics is begun in the Sophomore year, and completed in that year by students taking agriculture and textile industry.

All other students take physics, both theoretical and practical, in the Junior year.

The teaching is by lectures and experiments interspersed with quizzes, exercises, and monthly reviews.

In the physical laboratory the student makes for himself the experiments of a general laboratory course. These experiments serve to further impress the theoretical principles upon the mind and to show the bearing of the subject upon practical matters in general.

230. Principles of Physics.

Sophomore Class

Sophomore Class; Agricultural Courses. A complete course in the principles of physics.

Text-book: Hoadley's Elements of Physics.

231. General Physics.

Junior Class; Courses IV, V, and VI.

Properties of matter, physical measurements, mechanics of solids and fluids, electricity and magnetism.

Text-book: Hoadley's Elements of Physics.

232. General Physics.

Junior Class, Courses IV, and V.

Electricity and magnetism, heat, sound, and light.

Text-books: Hoadley's Elements of Physics, Carhart's University Physics, Lectures and Notes.

233 Physical Laboratory.

Junior Class, Courses IV, and V.

Experimental investigation of the physical properties of matter, and the verification of the laws of mechanics, heat, sound, light, electricity and magnetism.

For description of equipment, see page 44.

Drawing and Designing.

Associate Professor Lee.

Assistant Professor Klugh.

Instructor Birch.

Instructor Harris.

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

240. *Freehand Drawing.*

Freshman Class; All Courses.

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

242. *Mechanical Drawing.*

Freshman Class; Courses IV, V, VI, VII.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines, from sketches and models, tracing and blue printing.

243. *Mechanical Drawing.*

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings, tracing and blue printing.

244. *Mechanical Drawing.*

Sophomore Class; Courses IV, V, VII.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts, tracing and blue printing.

244a. *Mechanical Drawing.*

Sophomore Class; Course VI.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications; lettering; topographical drawing.

245 *Mechanical Drawing.*

Junior Class; Course V.

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tracing and blue printing.

246. *Mechanical Drawing.*

Junior Class; Course VI.

First half the same as Course 245; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

247. *Mechanical Drawing.*

Junior Class; Course IV.

First half same as Course 245. Second half, drawing of furnace designs and other metallurgical appliances.

248. *Machine Design.*

Senior Class; Course V.

Necessary drawings for work under construction in the shops; details of steam and gas engine and electrical machinery. Design drawing required in graduation thesis.

249. *Mechanical Drawing.*

Senior Class; Course VI.

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

249a. *Mechanical Drawing.*

Senior Class; Course VII.

Cam Drawing; Jacquard tie-ups, etc. This work is done in the Textile Department.

For description of equipment, see page 44.

Forge and Foundry.

Assistant Professor Gantt.

Instructor Lewis.

250. *Forge Work.*

Freshman Class; All Courses.

Study of Buffalo down-draft forges; graduated exercises, embracing fundamental operations of forging, such as upsetting, bending, punching, twisting, welding, etc. Part of third term is devoted to working with tool steel, involving processes of annealing, hardening, tempering, etc.

251. *Foundry Work.*

Names and uses of molders' tools; tempering and working of molding-sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

252. *Forge Work.*

Freshman Class, Courses I, II, III.

Study of Buffalo down-draft forges. Short course, embracing fundamental operations of forging.

For description of equipment, see page 45.

Machine Shop.

Assistant Professor Howard

260. *Machine Shop.*

Junior Class, Courses V, VI, VII.

Bench Work in chipping, filing, scraping, and polishing is begun first. Students are given instruction in the proper handling of the hammer and chisel, grinding the chisel and chipping cast iron.

They are then required to work a casting to dimensions and quality of finish indicated on a drawing furnished them.

After this chipping is completed, the same casting is filed to flat surfaces, which process is followed by scraping to surface plate and by polishing.

Students are next advanced to machine work, simple pieces of lathe work being given first.

Practice is given in turning, boring, threading, filing, and polishing, very accurate measurements with both spring and micrometer calipers being required.

From lathe work, the student progresses through the various processes of drilling, shaping, planing, milling and grinding.

Each student is required to do his own tool grinding.

261. *Machine Shop.*

Senior Class, Courses V, VI.

The work in the Senior year consists in the building of small machines, such as gasoline engines, electric motors, gene-

rators, etc., from carefully worked out designs supplied to the students, this work being done under the close supervision of the instructor in charge.

This machine building involves general machine work, and covers the whole field of operations.

The parts of these machines are very carefully checked, and work falling outside the close limits of error is rejected.

These machines become the property of their builders by payment of the price of material used in their construction.

Woodwork.

Assistant Professor Gardner.

Instructor Littlejohn.

The Course in Woodwork does not aim to make the student a skilled workman, but rather to teach the proper use of tools, at the same time training the hand and the eye, to impress the importance of marking the exact dimensions, and to induce the proper reasoning necessary to reach a desired end.

The course covers two years, advancing through elementary principles and practice to pattern making, where a series of exercises teaches the fundamental principles. Then large patterns of machines under construction are undertaken, giving the student opportunity to learn commercial shop methods, and to apply intelligently all the principles of pattern making.

270. *Woodwork.*

Freshman Class, Courses IV, V, VI, VII.

Use, care and sharpening of tools, exercises to teach use of planes, saws, chisels, squares, etc.

Advanced exercises involving dove-tailing, glueing and polishing. Also full lathe course with face plate and chucking work.

271. *Woodwork.*

Freshman Class Courses I, II, III.

The work is given for two terms only, and is very much the same as course 270, except that general principles are substituted for some of the details.

272. *Woodwork—Pattern Making.*

Sophomore Class, -Courses IV, V, VI, VII.

The principles of pattern making are taught with special exercises. Then large and complicated patterns of machines under construction are undertaken, and the large machines in the planing shops are explained and used as needed. Cabinet and furniture making are taken up to gain the use of machines not needed in pattern work.

CHEMICAL DEPARTMENT.

Professor Hardin, Director.

Chemistry.

*Professor Hardin
Associate Professor Brackett.
Assistant Professor Henry
Assistant Professor Hall.
Instructor Freeman.*

300. General Chemistry.

Sophomore Class; All Courses.

Inorganic chemistry and the leading facts and principles of organic chemistry. First term, non-metals; second term, metals; third term, organic chemistry.

Text-book: Roscoe's Elementary Chemistry.

301. Chemical Laboratory.

Sophomore Class; All Courses.

Introductory work and qualitative analysis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. Industrial Chemistry.

Senior Class; Courses III and IV.

The applications of chemistry in the more important arts and manufactures. Among the subjects studied are: sulphuric acid; soda ;chlorine; potash salts; fertilizers; lime; mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. Chemical Laboratory.

Junior Class; Courses I, II, III, IV, VII.

Qualitative and quantitative analysis. Assaying is given in the metallurgical course.

Books used: Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Lincoln and Walton's Quantitative Analysis; Notes on Assaying.

304. *Agricultural Chemistry.*

Junior Class; Courses I, II, III.

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the composition and manufacture of fertilizers, the composition of feeding stuffs and dairy products.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman.

305. *Chemical Laboratory*

Junior Class; Courses I and II.

Senior Class; Course III.

Quantitative analysis of fertilizers, soil, ashes of plants, water, cattle foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing methods of analysis adopted by the Association of Official Agricultural Chemists; Lincoln and Walton's Quantitative Analysis.

306. *Physical Chemistry; History of Chemistry.*

Junior Class; Course IV.

Text-books: VanDeventer's Physical Chemistry; Venable's History of Chemistry.

Metallurgy.

Associate Professor Brackett.

310. *Metallurgy.*

Senior Class; Course IV.

Text-books: Sexton's Elementary Text-book of Metallurgy. Hiorn's Mixed Metals; Notes on Alloys.

311. *Chemical and Metallurgical Laboratory.*

Senior Class; Course, IV.

For description of buildings and equipment, see page 48.

DEPARTMENT OF TEXTILE INDUSTRY.

Professor Doggett, Director.

All the processes, from the raw stock to the dyed and finished material, are taken up in detail. The practical work, while developing a certain amount of skill, has its greatest value in making evident the dependence of successful manufacture upon a proper application of fundamental principles.

Mill construction, the organization and relations of the various departments of an industrial establishment; the determination of cost of production; and related matters receive considerable attention, though not treated as independent courses. Each student is required to submit an organization draft and a list of the machinery equipment for different sizes of mills for making different classes of products, and at least one Jacquard design.

While bookkeeping is not in this course, all students are advised to work out by themselves the course given in the Agricultural Department that the methods of cost finding and tabulation of manufacturing made prominent in the work of each division may be handled with ease. The immediate and prospective value of some experience in a mill while pursuing the course is so great that all students are urged to spend at least one summer vacation in mill work.

Carding and Spinning.

Assistant Professor D. E. Earle.

400. *Raw Material; Cotton Grading.*

Junior Class; Course VII.

Study of the physical properties of cotton to ascertain the grade, length of staple, and general spinning qualities. The effects of temperature and humidity on fibres.

401 *Opening and Mixing.*

Junior Class; Course VII.

Reasons for opening and mixing. When and how to open and mix. Effects of blending on the resultant yarn.

402 *Picker Room.***Junior Class; Course VII.**

Arrangement of machinery; construction; settings and speeds for various lengths of fibres; calculations.

403. *Carding.***Junior Class; Course VII.**

Purpose of carding; construction and comparison of different types; grinding, with practice in making all settings; erections and calculations for changing yarns and speeds.

404. *Railway Heads and Drawing Frames.***Junior Class; Course VII.**

Purpose, use, construction; comparison of the leather covered rolls with the metallic rolls. Settings and calculations.

405. *Fly Frames.***Senior Class; Course VII.**

Slubber, intermediate, fine roving, and jack frames; construction, care and operation. Calculations for draft, twist, lay tension and other gears.

406. *Yarn Manipulation.***Senior Class; Course VII.**

Twisting, reeling, spooling, beaming, and slashing; the mixing of size for various kinds of yarns.

407. *Combing.***Senior Class; Course VII.**

Sliver lap machine; ribbon lap machine; comber; construction, operation and care of each, with practice in adjusting and timing.

408. *Spinning Frames.***Senior Class; Course VII.**

Construction, comparison and operation of the leading types of modern ring spinning frames; coarse, medium, and fine numbers spun; calculations for the various change gears and constants.

409. *Spinning Mules.***Senior Class; Course VII.**

A study of the construction; practice in operating and adjusting; uses of mule spun yarns; calculations for all necessary changes.

Text and Reference Books: Earle's Erection of Card Room Machinery; Monies' Sizing and Sizing Compounds; Nasmith's Student Cotton Spinner; Taggart's Cotton Spinning; Taylor and Doggett's Cotton Mill Record Forms; Tompkins' Cotton Mill Processes and Calculations.

Weaving and Designing

Assistant Professor McSwain.

410. *Hand Loom Weaving.*

Junior Class; Course VII.

The work in hand-loom weaving is parallel with the course in designing for the first term of the session. The student is required to produce on the loom most of the elementary designs made in designing.

411. *Power Loom Weaving.*

Junior and Senior Classes; Course VII.

Power loom weaving is taken up at the beginning of the second term in the Junior year, and includes a study of the construction and "fixing" of cam looms for two, three, four and five harness work. A study is also made of the construction and operation of automatic looms, Dobby shedding engines, box motions, leno attachments and Jacquards.

412. *Designing.*

Senior Class; Course VII.

The course in designing includes the study and construction of the foundation, derivation and combination weaves used for the construction of single and double cloths; and the making of drawing-in and chain drafts for the same.

Instruction is also given in color designing for textile fabrics; chenille, swivel, lappet and pile fabric designing and weaving.

413. *Jacquard Designing.*

Senior Class; Course VII.

Method of building Jacquard harness for straight-through, point and combination tie-ups for fabrics of different design and construction; methods of laying out figures and enlarging sketches for design.

414. *Cloth Analysis.*

Senior Class; Course VII.

Methods of finding the counts of yarn in any sample of cloth; determining the construction, weave and weight of any sample so

as to reproduce the same or to find the cost of material in the fabric.

Text and Reference Books: Fox's Mechanism of Weaving; Holmes Cotton Cloth Designing; Ivy's Loom Fixing; McSwain's Weaving Machinery and Processes; Posselt's Technology of Textile Design; Posselt's Jacquard Machine Analyzed and Explained.

Textile Chemistry and Dyeing

Professor Doggett.

420. *Textile Chemistry.*

Junior Class; Course VII.

Manufacture, properties, technical analysis and application of the more important inorganic chemicals used in the textile industry; general principles of synthetic organic chemistry.

The processes used in the laboratory course in illustration are based so far as possible upon the methods used on the large scale.

Text-book: Olney's Textile Chemistry and Dyeing.

421. *Dyeing.*

Senior Class; Course VII.

Chemistry of textile fibres; bleaching, dyeing, printing and finishing; Synthetic dyestuffs, their manufacture, properties, identification, application. The laboratory course includes bleaching, dyeing, calico printing; the preparation of representatives of the different classes of dyestuffs.

Text-books: Cohen's Theoretical Organic Chemistry; Doggett's Laboratory Notes on Textile Chemistry.

Reference Books: Schultz and Julius' Organic Coloring Matters; Allen's Commercial Organic Analysis; Georgievic's Chemical Technology of Textile Fibres; Knecht, Rawson and Rosenthal's Manual of Dyeing; Matthews' Laboratory Manual of Dyeing and Textile Chemistry.

ACADEMIC DEPARTMENT

English.*Professor Furman.**Associate Professor Daniel.**Assistant Professor Keitt, Bryan, Bradley.*

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

501. *English Grammar, Reading and Composition.***Freshman Class; All Courses.**

A review of the subject of grammar introduces the work of this class. Constant drill is given in theme writing; pupils being expected to make use of the College library under direction of instructors. Methods of using dictionaries, encyclopaedias, and other reference books are explained practically to the students. Full supplementary readings are required, and practice is given in the writing of abstracts of books so read.

Text-books: Emerson-Lockwood's *Composition and Rhetoric*; Buehler's *Practical Exercises in English*; Webster's *Academic Dictionary*, and such English classics as may be assigned.

502. *Composition, Rhetoric, American Literature.***Sophomore Class; All Courses.**

The study of composition and rhetoric is pursued throughout the year, with special emphasis laid on practical composition. Carefully written themes are required weekly. The course in American Literature includes a consideration of the development of American literature, brief biographies of the leading authors, and a careful study of selections from their chief works. The course of parallel reading is taken from both American and English writers.

Text-books: Newcomer and Seward's *Rhetoric in Practice*, Woolley's *Hand-Book of Composition*, and Painter's introduction to American Literature.

503. *English Literature.***Junior Class; All Courses.**

The work in the Junior class begins with the critical study of Macaulay as an essayist. This is followed by a general course

in English literature. Pancoast's English Literature is the text-book, this work being supplemented by lectures. Monthly essays are required, and frequent oral readings, embracing selections from the principal English authors from Chaucer to the present time.

504. *Studies in Shakespeare.*

Senior Class; All Courses.

This class is given instruction in the principles of literary criticism. A somewhat full course in Shakespeare study is furnished. Several plays are read in class, the students being orally examined on all questions, grammatical, historical and ethical, which arise in the study of this author. Monthly essays are required.

History and Political Economy.

Professor Morrison.

Assistant Professor Holmes.

The course includes history of the United States, South Carolina history, general history, commercial geography, civics and political economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The class rooms are supplied with globes, charts, maps, and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College library.

The history of South Carolina and the history of the South receive special attention. "A people which takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

511. *South Carolina History.*

Freshman Class; All Courses.

Text-book: Weber's History of South Carolina.

512. *Commercial Geography.*

Freshman Class; All Courses.

Text-book: Olin's Commercial Geography.

513. *Civics.*

Freshman Class; All Courses.

Text-book: Smith's Training for Citizenship.

514. *General History.*

Sophomore Class; Courses IV, V, VI, VII

Junior Class; Courses I, II, III.

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediaeval and Modern History.

515. *Political Economy.*

Senior Class; All Courses.

Text-book: Seager's Economics, Briefer Course.

Mathematics

Professor Martin.

Associate Professor Shanklin.

Assistant Professors Hunter, Johnstone, Bramlett.

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics. (See requirements for admission, page 76.)

520. *Algebra.*

Freshman Class; All Courses.

Review of involution, evolution, theory of indices and quadratics; simple intermediate equations; inequalities; proportion and variation; logarithms.

Text-book: Well's Text-book in Algebra.

521. *Geometry.*

Freshman Class; All Courses.

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles. Plane and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume. Special attention is given to the formation, on the part of students, of the habit of clear and accurate reasoning and concise expression.

Text-book: Gore's Plane and Solid Geometry.

522. *Trigonometry.*

Sophomore Class; All Courses.

Measurements of angles; trigonometric functions; right triangle; goniometry; relations between functions of one angle; functions of multiple angles; inverse functions; trigonometric equations; oblique triangles; trigonometric solutions of cubic equations; spherical trigonometry; general formulas; right spherical triangle; oblique spherical triangle; applications.

Text-book: Well's Plane and Spherical Trigonometry.

524. *Higher Algebra.***Sophomore Class; Courses IV, V, VI, VII.**

Progressions; binomial theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

525. *Analytic Geometry.***Sophomore Class; Courses IV, V, VI, VII.****Junior Class; Courses IV, V, VI, VII.**

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of second degree involving two variables; higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Nichol's *Analytic Geometry* (Revised Ed.)526. *Differential Calculus.***Junior Class; Course IV. V, VI, VII.**

Differentiation of algebraic functions; transcendental functions; successive differentiation and development of functions; functions of two variables; tangents and asymptotes; maxima and minima; radius of curvature; evolutes and involutes; envelopes.

Text-book: Snyder and Hutchison's *Differential and Integral Calculus*.527. *Integral Calculus.***Junior Class; Courses IV, V, VI, VII.**

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of two variables; lengths of curves; areas of plane curves; rectification of curves; cubature of volumes.

Text-books: Snyder and Hutchison's *Differential and Integral Calculus*.540-541. *Bookkeeping.***Courses I, II, III.**

The course in Book-keeping is optional with German, and is designed to give the students a good working knowledge of the subject. It has been introduced with a special view to enable Agricultural students to keep neat and accurate accounts of all business transactions relative to the farm.

The course seeks to familiarize the student with business methods in keeping accounts with parties, firms, banks, etc., and he is given abundant practice in making out business papers, of ordinary occurrence, and in making trial balances, balance sheets, statements, etc.

Text Used: Sadler and Rowe's "*Commercial and Industrial Book-keeping.*"

Modern Languages

Professor Doggett.

The courses in German and French are designed to give the student general training and culture, and to enable him to make use of the languages in scientific research. These language courses are not included in any of the regular courses; German may be taken instead of book-keeping in the Freshman year of the Agricultural Courses. Students looking forward to positions in the U. S. Dept. of Agriculture, State Experiment Stations, or contemplating postgraduate work will find a working knowledge of German of considerable value.

550. *German I.*

The essentials of German grammar; collateral reading; translation of easy German prose; German prose composition.

551. *German II.*

German syntax; study of idioms and prefixes; German-English cognates; translation of literary and scientific German.

Text-books: Paul V. Bacon's German Grammar for Beginners; Bacon's Im Vaterland; Goethe's Die neue Melusine, or similar text; Wait's German Science Reader.

Reference Books: Curme's Grammar of the German Language; Blackwell's German Prefixes and Suffixes; Heath's German Dictionary.

555. *French I.*

The essentials of French grammar; collateral reading; translation of easy French prose; French prose composition.

556. *French II.*

French syntax; French verbs; French idioms and prepositions; translation of literary and scientific French.

Text-books: Thieme and Effinger's French Grammar; Bowen's First Scientific French Reader; Herdler's Scientific French Reader.

Reference Books: Fraser and Squair's French Grammar; C. De La Moriniere's French Prepositions and Idioms; Gase's Dictionary of the French and English Languages.

MILITARY DEPARTMENT.

Captain M. B. Stokes, U. S. Army, Director.
Commandant of Cadets.

Military Science and Tactics.

Captain Stokes.

The course in military instruction, as prescribed and followed, is both theoretical and practical.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

Theoretical.**600. *Tactics and Elements of Military Science.*****Junior Class; All Courses.**

The theoretical instruction, consisting of talks and lectures, includes the following, as prescribed by the War Department: Infantry Drill Regulations, Small Arms Firing Manual, Field Service Regulations, and Manual of Guard Duty.

Senior Class; All Courses.**601. *Military Science.***

Lectures on the military history, the military system, and the military policy of the United States.

Practical.**602. *Military Drill.*****Required of all Cadets.**

Infantry drill, including close and extended order; advance and rear guards and outposts; marches; the ceremonies of review, inspection, parades, guard mounting, and escort of the colors; gallery practice; guard duty.

603. *Target Practice.***Senior Class.**

Complete course of instruction in rifle practice on target range.

THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Station Staff

JOSEPH NELSON HARPER, B. S., M. S. A.
Director and Agriculturist.

CHARLES CARTER NEWMAN, B. S.
Horticulturist.

HENRY WALTER BARRE, M. S.
Botanist and Plant Pathologist.

ALBERT FREDERIC CONRADI, B. S. A., M. S.
Entomologist and Zoologist.

THOMAS ELLISON KEITT, B. S.
Chemist.

ENOCH BARNETT, D. V. M.
Veterinarian and Animal Husbandman.

JOHN NATHAN HOOK
Secretary and Librarian.

WILLIAM D. GARRISON, B. S.
Superintendent Coast Land Experiment Station.

MISS HELEN BRADFORD
Stenographer.

BURNS GILLISON
Foreman Experiment Station Farm.

The Agricultural Experiment Station of South Carolina is a department of Clemson Agricultural College. By action of the Board of Trustees the Station work was separated from the College work in order to enable the Station investigators to give their entire time to experiments and research problems relating to the agriculture of South Carolina. The Experiment Station is supported entirely by funds provided by acts of Congress known as the Hatch and Adams Acts, and its object is, according to the law providing for its establishment, to aid in acquiring and diffusing among the people useful and practical

information; to conduct scientific investigations, with reference to the principles and applications of agricultural science; to rectify experiments already made; to examine into the physiology of animals and plants that remedies may be provided for the several diseases to which they are subject; to conduct such other researches relating to agricultural industry; and to make reports of progress or of results obtained, to be distributed to the farmers of the State who may request the same.

The following divisions are operating in the Station:-- Agronomy and Soils, Animal Husbandry and Veterinary Science, Zoology and Entomology, Chemistry, Horticulture, and Botany and Plant Pathology. The offices and laboratories occupy a portion of the Agricultural Hall, while the Station experimental farm, consisting of about 200 acres, is located east of and adjoining the College campus, and is equipped with the necessary buildings, including foreman's residence, barn for the proper housing of tools, live stock, etc., the horticulturist's laboratory, and the dairy barns and silos. On this farm experiments are constantly in progress covering a large range of agricultural subjects and these experiments are accessible to the inspection of the College students.

Since the Station was organized, 149 bulletins and 22 annual reports have been issued. Nothing so readily gives practical value and general importance to Experiment Station work as an extended dissemination of the reports of its progress and accomplishment in the solution of agricultural problems. The work of distributing analyses of commercial fertilizers among the farmers of this State is continued. A leaflet of four pages containing the analyses is published at the College and mailed from the office of the Station secretary once a week for twenty-two weeks

in editions of 14,000 copies. These leaflets are distributed with weekly regularity upon as many farms in the State. The purpose of this wide diffusion of the records of the chemical analysis is for the protection of the farmer against the purchase of fraudulent fertilizer. The total number of bulletins issued from this Station during the past fiscal year, including the fertilizer leaflets, amounted to 404,000 copies. A striking evidence of the growing interest in all matters pertaining to the publications of this Station is in the statement of the fact that the accession of 1,600 names to the permanent mailing list was made within the past year.

Some of the characteristics of the organization and work that give special importance to the South Carolina Experiment Station as a leading and influential department of Clemson Agricultural College are: The effective support of the Board of Trustees, well equipped laboratories, a good experimental farm, a corps of specialists conducting and directing the prosecution of research work in the various divisions, and supervising a correspondence that embraces and pervades every agricultural community in the State.

ALUMNI ORGANIZATION

Clemson College Alumni Association.

D. H. HENRY, '98, President.

B. H. RAWL, '00, First Vice-President.

L. E. BOYKIN, '05, Second Vice-President.

T. E. KEITT, '06, Third Vice-President.

H. W. BARRE, '05, Secretary.

J. E. HUNTER, '96, Treasurer.

A. J. SPEER, '05, Alumni Orator of 1910; D. H. HILL, '06, Alternate.

There are Alumni Chapters in the following cities:-

New York, N. Y.

Pittsburgh, Pa.

Washington, D. C.

Schenectady, N. Y.

Greenville, S. C.

Charleston, S. C.

Rock Hill, S. C.

Pittsfield, Mass.

Register of Graduates and Former Students

As soon as the necessary information is at hand a Register of Graduates and Former Students will be published as a separate bulletin. Graduates, former students, and friends of the institution are requested to co-operate in making this record as nearly complete as possible. The following is the information desired: name, address, year of graduation, or of attendance at the College, and occupation. This should be sent to the Secretary of the Clemson College Alumni Association.

GRADUATES

Degree of Bachelor of Science with Diploma

NAME	COURSE	COUNTY
R. E. Adams	Civil	Edgefield
C. E. Baldwin	Agri. & Chem.	Greenville
G. M. Barnett	Agri. & Ani. Ind.	Oconee
D. L. Bissell	Agri. & Chem.	Charleston
J. R. Blair	Chem. & Geol.	York
R. E. Blake	Agri. & Ani. Ind.	Abbeville
L. B. Brandon	Agri. & Ani. Ind.	York
L. P. Byars	Agri.	Marion
E. Chamnes	Mech. Elec.	Marlboro
O. M. Clarke	Agri.	Lexington
J. S. H. Clarkson	Mech. Elec.	Richland
E. D. Clement	Agri.	Charleston
S. Coles	Agri.	Richland
J. C. Covington	Civil	Marlboro
W. G. Dominick	Mech. Elec.	Newberry
W. J. Evans	Civil	Abbeville
R. A. Fetzer	Mech. Elec.	Concord, N. C.
F. Fleming	Agri. & Ani. Ind.	Greenville
D. P. Folk	Agri.	Bamberg
J. T. Folk	Civil	Newberry
E. E. Gary	Agri. & Chem.	Greenville
P. M. Gee	Mech. Elec.	Union
J. D. Graham	Agri.	Sumter
J. O. Graham	Agri. & Chem.	Williamsburg
H. H. Greene	Agri. & Ani. Ind.	Abbeville
A. L. Harris	Agri. & Chem.	Spartanburg
R. A. Harris	Mech. Elec.	Laurens
T. M. Hunter	Mech. Elec.	Newberry
W. G. Hyrne	Chem. & Geol.	Colleton
R. P. Jeter	Chem. & Geol.	Union

NAME	COURSE	COUNTY
A. Jones, Jr., B. S.	Mech. Elec.	Richland
G. W. Keitt	Agri. & Chem.	Pickens
J. H. Lesesne	Mech. Elec.	Charleston
J. L. Marshall	Mech. Elec.	Marion
L. deB. McCrady, Jr.	Civil	Charleston
H. W. McIver	Mech. Elec.	Chesterfield
J. P. McMillan	Mech. Elec.	Marion
P. Miley	Agri.	Hampton
W. F. Odom	Agri. & Chem	Barnwell
W. C. Pitts	Civil	Laurens
J. C. Pridemore	Agri.	Cherokee
M. Quattlebaum	Civil	Horry
T. B. Reeves	Agri.	Laurens
H. L. Rivers	Civil	Greenwood
H. K. Sanders	Agri. & Ani. Ind.	Chester
W. J. Shealey	Agri. & Ani. Ind.	Newberry
E. H. Shuler	Mech. Elec.	Aiken
F. W. Smith	Mech. Elec.	Marion
W. C. Spratt	Mech. Elec.	Chester
D. W. Watkins	Agri. & Ani. Ind.	Anderson
A. C. Whittle	Agri. & Ani. Ind.	Saluda
J. H. Wilson	Mech. & Elec.	Chester
E. H. Wood	Agri.	Cherokee
C. M. Wooten	Mech. & Elec.	Chester
B. E. Wolff	Agri. & Chem.	Laurens

TWO-YEAR TEXTILE COURSE

Certificate

D. L. Boulware.....	Laurens
L. C. Langston	Laurens
L. S. Sitton.....	Anderson
R. P. Sweeney	Greenwood
J. W. Waldrop.....	Newberry

COTTON GRADING COURSE

Certificate

G. L. Bell.....	Aiken
W. L. Bruce.....	Marion
W. M. Crenshaw.....	Anderson
G. P. Guntharp.....	Ocone
R. E. Watkins.....	Anderson

STUDENTS 1909-1910.

Senior Class.

NAME	COURSE	COUNTY
W. M. Albergotti	Mech. Elec.	Orangeburg
s W. Allen	Agri. III	Spartanburg
F. R. Baker	Civil	Charleston
W. A. Barnette	Agri. II	York
s W. D. Barnett	Text.	Oconee
s P. A. Baxley	Agri. II	Barnwell
A. J. Becker	Agri. III	Spartanburg
H. F. Bethea	Agri. I	Marion
L. C. Boone	Civil	Orangeburg
B. D. Boykin	Agri. I	Kershaw
s W. J. Brockington	Agri. II	Williamsburg
D. C. Britt	Mech. Elec.	Abbeville
J. M. Buckner	Agri. III	Barnwell
G. A. Burton	Civil	Newberry
N. E. Byrd	Civil	Orangeburg
s J. N. Carothers	Agri. III	York
D. B. Clayton	Mech. Elec.	Fairfield
s H. R. Clinkscales	Agri. III.	Fairfield
L. A. Coleman	Mech. Elec.	Florence
W. C. Crum, Jr.	Civil	Orangeburg
K. Easterling	Mech. Elec.	Marlboro
s S. E. Evans	Agri. II	Clarendon
G. T. Floyd	Civil	Williamsburg
T. Fulmer	Mech. Elec.	Saluda
F. B. Green	Mech. Elec.	Richland
A. Grier	Mech. Elec.	Sumter
R. P. Henderson	Agri. II	Greenwood
V. B. Higgins	Civil	Pickens
J. L. Hill, Jr.	Civil	Abbeville

s—Scholarship Student.

NAME	COURSE	COUNTY
s W. M. Hodge	Agri. III	Clarendon
O. A. Hydrick	Civil	Orangeburg
s C. F. Inman	Agri. III	Cherokee
s H. S. Johnson	Agri. II	Florence
S. O. Kelley	Mech. Elec.	Americus, Ga.
L. L. LaRoche	Chem. & Geol.	Charleston
P. E. Lee	Mech. Elec.	Spartanburg
s W. J. Marshall	Agri. II	Greenwood
s E. C. Martin	Agri. I	Pickens
C. F. Middleton	Mech. Elec.	Charleston
s J. D. Murray	Text.	Colleton
A. McDavid	Civil	Abbeville
A. A. McKeown	Agri. II	Chester
s C. McLaurin	Agri. I	Sumter
R. E. Nickles	Agri. I	Abbeville
S. O. Pegues	Agri. I	Marlboro
E. H. Pinckney	Agri. I	Charleston
H. D. Plenge	Mech. Elec.	Charleston
s J. S. Pyatt, Jr.	Agri. I	Georgetown
H. L. Reeves	Agri. I	Marion
J. C. Reid	Mech. Elec.	Spartanburg
s J. M. Ridgill	Agri. I	Clarendon
C. M. Robbs	Civil	Cherokee
C. P. Roberts, Jr.	Civil	Greenwood
W. A. Robinson	Civil	Pickens
s L. D. Rogers	Agri. III	Darlington
G. D. Ryan	Mech. Elec.	Sumter
T. R. Salley	Mech. Elec.	Orangeburg
W. E. Seabrook	Civil	Charleston
J. J. D. Shuler	Agri. I	Lexington
K. B. Shuler	Civil	Lexington
M. D. Simms	Mech. Elec.	York

s—Scholarship Student.

NAME	COURSE	COUNTY
<i>s</i> R. M. Simpson	Agri. III	Chester
S. B. Sullivan	Mech. Elec.	Anderson
L. W. Summers	Agri. II	Orangeburg
F. G. Tarbox, Jr.	Agri. I	Georgetown
E. J. Thornhill	Agri. II	Dorchester
C. P. Townsend	Mech. Elec.	Marlboro
C. H. Trott	Civil	Charleston
H. C. Twiggs	Civil	Spartanburg
V. L. Warner	Agri. III	Greenwood
L. D. Webb	Mech. Elec.	Anderson
W. P. White	Mech. Elec.	Laurens
J. M. Wylie	Civil	York

Junior Class.

F. H. All	Agri. II	Barnwell
<i>s</i> L. B. Altman	Agri. I	Horry
M. W. Arthur	Mech. Elec.	Union
D. C. Beaty	Agri. I	Union
<i>s</i> H. C. Beaty	Text.	Georgetown
A. S. Bedell	Civil	Greenville
P. L. Bissell	Civil	Charleston
L. D. Boone	Agri. III	Orangeburg
S. L. Britt	Agri. II	Abbeville
O. B. Brodie	Civil	Lexington
J. H. Bull	Civil	Sumter
<i>s</i> G. T. Cassels	Agri. II	Fairfield
<i>s</i> A. D. Chapman	Agri. I	Pickens
O. R. Cohen	Civil	Charleston
<i>s</i> W. R. Connelly	Text.	Chester
H. P. Cooper	Agri. II	Fairfield
<i>s</i> J. T. Crawford	Text.	Laurens
E. I. Davis	Mech. Elec.	Greenwood

s—Scholarship Student.

NAME	COURSE	COUNTY
H. S. Davis	Mech. Elec.	Charleston
B. H. Deason	Agri. I	Abbeville
s J. A. Dew	Agri. I	Greenville
s O. O. Dukes	Agri. II	Dorchester
s H. C. Eagerton	Agri. I	Berkeley
s M. H. Epps	Text.	Florence
G. C. Fant	Chem. Geol.	Anderson
s J. R. Fizer	Text.	Orangeburg
s W. Foster	Text.	Cherokee
s B. P. Folk	Agri. II	Newberry
s R. W. Freeman	Agri. I	Darlington
s H. Fulmer	Agri. II	Saluda
G. D. Garner	Text.	Eatonton, Ga.
s W. C. Garrett	Text.	Pickens
s B. W. Gettys	Agri. II	Kershaw
C. R. Gillam	Civil	Bamberg
F. V. Gilmer	Mech. Elec.	Greenville
J. L. Gilmore	Agri. I	Berkeley
W. N. Ginn	Mech. Elec.	Hampton
s J. A. Goodwin	Agri. II	Greenville
W. S. Goodman	Civil	Oconee
s O. H. Graham	Agri. II	Williamsburg
B. B. Harris	Agri. II	Anderson
W. H. Hanckel	Agri. II	Charleston
L. H. Hardin	Mech. Elec.	Cherokee
s L. C. Haskell	Agri. III	Abbeville
s L. C. Harrison	Agri. III	Oconee
J. W. Harrison	Mech. Elec.	Oconee
N. O. Head	Civil	Aiken
s W. N. Henderson	Agri. III	Newberry
W. M. Haynesworth	Agri. II	Florence
s E. S. Jenkins	Agri. I	Charleston

s—Scholarship Student.

NAME	COURSE	COUNTY
Jos. E. Jenkins	Agri. I	Berkeley
s Jno. E. Jenkins	Agri. II	Richland
s F. H. Jeter	Agri. I	Union
s J. B. Keith	Agri. I	Florence
s B. T. Knight	Text.	Chesterfield
s J. S. Knox	Agri. I	Oconee
s G. E. Lachicotte	Agri. II	Georgetown
B. F. Lawrence	Mech. Elec.	York
J. K. Lawton	Chem. Geol.	Hampton
s L. S. Lindler	Agri. II	Lexington
R. W. Lowry	Mech. Elec.	Oconee
s C. S. Lykes	Agri. III	Richland
s F. W. Lykes	Text.	Richland
s T. S. Marshall	Agri. III	Greenwood
J. M. Martin	Civil	Marion
s W. W. Mickle	Agri. II	Kershaw
J. C. Milling	Mech. Elec.	Greenwood
s R. J. McIntosh	Text.	Richland
L. C. McClure	Mech. Elec.	Chester
O. P. McCord	Mech. Elec.	Greenwood
G. L. McCord	Chem. Geol.	Abbeville
E. A. McCreary	Text.	Aiken
F. F. Parker	Mech. Elec.	Spartanburg
W. G. Perry, Jr.	Civil	Greenville
s F. M. Rast, Jr.	Agri. I	Calhoun
s J. A. Riley	Agri. I	Bamberg
F. E. Rogers	Mech. Elec.	Darlington
T. B. Sandifer	Mech. Elec.	York
O. T. Sanders	Agri. I	Sumter
A. M. Salley	Agri. I	Orangeburg
F. E. Schroder	Civil	Charleston
s J. F. Sherard	Agri. I	Greenwood

s—Scholarship Student.

NAME	COURSE	COUNTY
E. N. Sitton	Text.	Anderson
R. G. Stevens	Mech. Elec.	Greenville
s J. P. Stickley	Agri. III	Beaufort
W. E. Stokes	Agri. III	Bamberg
L. P. Tobin	Mech. Elec.	Barnwell
s S. G. Venning	Agri. I	Charleston
R. H. Walker	Mech. Elec.	Barnwell
s M. W. Wall	Agri. I	Marion
s W. M. Wiggins	Agri. I	Marion
T. D. Williams	Mech. Elec.	Matthews, N. C.
R. S. Wolfe	Agri. I	Orangeburg
H. M. Woodward	Civil	Spartanburg
L. T. Wyndham	Civil	Berkeley

Sophomore Class.

S. S. Abell	Eng.	Chester
F. Adams	Agri.	Lancaster
s H. A. Adams, Jr.	Text.	Edgefield
T. C. Adams	Text.	York
R. U. Altman	Chem. Geol.	Marion
s J. N. Ancrum	Agri.	Kershaw
G. M. Anderson	Agri.	Abbeville
H. W. Anderson	Eng.	Colleton
s B. R. Bacot	Text.	Charleston
J. A. Barre	Agri.	Lexington
s J. A. Bates	Agri.	Calhoun
W. S. Becker	Eng.	Spartanburg
T. E. Bell	Agri.	Lee
M. D. Berry	Agri.	Greenville
J. W. Blackwell, Jr.	Eng.	Darlington
E. E. Blount	Agri.	Barnwell
W. B. Britt	Eng.	Abbeville

s—Scholarship Student.

NAME	COURSE	COUNTY
A. J. Brown	Eng.	Pickens
S. M. Brown	Agri.	Anderson
G. W. Byars	Agri.	Cherokee
W. M. Byrd	Eng.	Darlington
Jno. C. Caldwell	Eng.	Spartanburg
R. D. Caldwell	Agri.	Cherokee
H. H. Collier	Eng.	Charleston
S. M. Connor	Agri.	Colleton
s M. L. Cooper	Agri.	Fairfield
s H. S. Covington	Agri.	Marlboro
J. R. Crawford	Eng.	Laurens
s W. D. Craig	Agri.	Fairfield
s R. S. Creech	Agri.	Barnwell
H. W. Cromer	Agri.	Abbeville
L. S. David	Eng.	Greenville
J. B. Davis	Eng.	Pickens
W. C. Davis	Eng.	Oconee
E. C. DeBruhl	Eng.	Abbeville
J. C. DeWitt	Agri.	Darlington
s C. H. Dixon	Agri.	Florence
J. M. Dreher	Chem. Geol.	Lexington
O. P. Earle	Agri.	Spartanburg
s C. P. Erwin	Agri.	Spartanburg
A. B. Evans	Eng.	Charleston
s T. S. Evans, Jr.	Agri.	Chesterfield
s J. F. Ezell	Agri.	Spartanburg
W. D. Ezell	Agri.	Spartanburg
s A. P. Fant	Agri.	Anderson
s C. B. Faris	Agri.	York
C. B. Farmer, Jr.	Agri.	Barnwell
s J. B. Ferguson	Agri.	Chester
G. W. Fleming	Eng.	Florence

s—Scholarship Student.

NAME	COURSE	COUNTY
s C. S. Folk	Agri.	Bamberg
s J. B. Free	Agri.	Union
s H. A. Freeman	Agri.	Laurens
J. H. Gage	Eng.	Union
s R. W. Galphin	Agri.	Orangeburg
A. E. Gilmore	Eng.	Union
s L. C. Gilstrap	Agri.	Pickens
s A. K. Goldfinch	Text.	Horry
s W. R. Gray	Agri.	Laurens
W. H. Greene	Agri.	Barnwell
P. S. Hale	Agri.	Charleston
s C. M. Hall	Agri.	Anderson
s E. E. Hall	Agri.	Lancaster
R. R. Hall	Eng.	Pickens
E. E. Hamlin	Eng.	Anderson
M. L. Hamer	Agri.	Marlboro
s G. L. Hardy	Text.	Edgefield
E. S. Harrell	Eng.	Florence
J. G. Harris	Agri.	Laurens
J. E. Hartley	Eng.	Lexington
s D. T. Hardin	Agri.	Abbeville
s H. W. Harvey	Agri.	Berkeley
s C. J. Hayden	Agri.	Orangeburg
s J. H. Hayden	Agri.	Orangeburg
s W. H. Hayes	Agri.	Spartanburg
M. S. Haynesworth	Eng.	Darlington
s G. J. Hearsey	Agri.	Marlboro
B. L. Hendricks	Agri.	Pickens
s W. W. Herbert	Agri.	Newberry
H. A. Heriot	Eng.	Lee
s J. D. Heriot	Agri.	Lee
D. B. Hill	Eng.	Bamberg

s—Scholarship Student.

NAME	COURSE	COUNTY
s J. G. Hudson	Agri.	Fairfield
s H. M. Hutson	Agri.	Aiken
O. Jacobs	Agri.	Newberry
L. S. Jeffords	Eng.	Florence
H. C. Jennings	Agri.	Orangeburg
s R. M. Jeter	Agri.	Richland
s C. F. Johnson	Agri.	Spartanburg
W. F. Johnson	Eng.	Florence
L. M. Jordan	Eng	Colleton
E. P. Josey	Agri.	Darlington
H. O. Kaigler	Eng.	Calhoun
L. M. Kay	Eng.	Pickens
H. S. Kennerly	Agri.	Greenwood
J. P. Knight	Agri.	Greenville
W. R. Lamotte	Eng.	Darlington
s D. L. Latimer	Text.	Abbeville
s J. G. Lawton	Agri.	Hampton
s J. T. Lazar	Agri.	Barnwell
R. E. Lee, Jr.	Eng.	Darlington
J. R. W. Lindler	Eng.	Lexington
E. G. Littlejohn	Eng.	Union
J. H. Mappus	Agri.	Charleston
s C. V. May	Agri.	Colleton
E. D. Mays	Agri.	Greenwood
s E. L. McCants	Agri.	Anderson
E. C. McCown	Agri.	Anderson
M. A. McCown	Eng.	Anderson
F. A. McCraw	Eng.	Cherokee
s O. F. McCrary	Agri.	Greenville
G. McGregor	Eng.	Anderson
D. McIntyre	Eng.	Marion
E. A. McKeown	Eng.	Chester

s—Scholarship Student.

NAME	COURSE	COUNTY
s F. M. Mellett	Agri.	Sumter
s J. A. Merritt, Jr.	Text.	Saluda
S. A. Miller	Chem. & Geol.	Lexington
J. E. M. Mitchell	Eng.	Charleston
M. P. Moore	Agri.	Sumter
s W. D. Motte	Agri.	Charleston
J. Nance	Eng.	Newberry
W. W. Newman	Eng.	Chesterfield
s R. A. Opt	Text.	Anderson
B. F. Owens	Agri.	Barnwell
s L. R. Page	Agri.	Spartanburg
A. B. Parker	Eng.	Sumter
T. M. Parker	Eng.	York
s B. F. Pennell	Agri.	Abbeville
s T. Perry	Text.	Greenville
W. C. Petrie	Eng.	Spartanburg
s W. Prior	Agri.	Anderson
W. H. Privette	Agri.	Darlington
s H. T. Prosser	Agri.	Williamsburg
C. F. Quackenbush	Agri.	Dorchester
A. P. Ransom	Eng.	Anderson
T. C. Redfern	Agri.	Oconee
F. L. Reese	Agri.	Abbeville
s T. R. Reid	Agri.	Greenville
W. H. Rentz	Eng.	Hampton
s F. W. Risher	Agri.	Colleton
s T. R. Risher, Jr.	Agri.	Colleton
H. F. Rivers, Jr.	Eng.	Charleston
W. H. Rochester	Eng.	Greenville
F. L. Ross	Agri.	Cherokee
s N. K. Rowell	Agri.	Marion
M. F. Sanders, Jr.	Eng.	Greenwood

s—Scholarship Student.

NAME	COURSE	COUNTY
J. A. Simpson	Eng.	Anderson
s A. G. Small	Agri.	Horry
E. A. Sompayrac	Eng.	Darlington
C. M. Sondley	Agri.	Abbeville
s C. H. Stanton	Agri.	Marlboro
s H. H. Stokes	Agri.	Bamberg
J. N. Stribling	Eng.	Oconee
R. A. Stribling	Eng.	Oconee
L. R. Therell	Agri.	Lancaster
E. W. Tison	Eng.	Hampton
s D. Tompkins	Text.	York
B. J. Truesdale	Eng.	Kershaw
s R. F. Ulmer	Agri.	Hampton
J. B. Wakefield	Eng.	Abbeville
J. W. Welborn	Agri.	Laurens
s J. H. S. Wessinger	Agri.	Lexington
J. J. Wheeler	Eng.	Saluda
F. A. Williford	Eng.	Anderson
L. M. Williford	Agri.	Anderson
J. A. Willoughby	Eng.	Florence
s T. B. Wilson	Agri.	Aiken
s J. M. Workman	Text.	Sumter
s L. F. Yates	Text.	Darlington
s G. H. Zerbst	Agri.	Charleston

Freshman Class.

J. P. Anderson	Eng.	Abbeville
L. K. Anderson, Jr.	Eng.	Spartanburg
R. A. Alexander	Agri.	Chester
s D. H. Arthur	Text.	Union
s I. D. Auld	Agri.	Charleston
J. A. Banks, Jr.	Eng.	Calhoun

s—Scholarship Student.

NAME	COURSE	COUNTY
W. D. Banks	Agri.	Calhoun
J. W. Barnwell, Jr.	Eng.	Charleston
G. D. Barr	Eng.	Greenville
A. H. Barrington	Eng.	Marlboro
J. D. Beacham	Eng.	Greenville
W. O. Benson	Eng.	Spartanburg
I. L. Bigham	Eng.	Chester
L. R. Blackmon	Eng.	Lancaster
J. Z. Blake	Eng.	Greenwood
DeW. Boggs	Agri.	Anderson
J. K. Boggs	Eng.	Pickens
I. P. Bolt	Agri.	Anderson
B. L. Bomar	Agri.	Spartanburg
H. J. Bomar	Eng.	Spartanburg
s F. W. Bouson	Agri.	Charleston
W. E. Bowers	Agri.	Kershaw
s H. G. Boylston	Agri.	Barnwell
L. L. Boyleston	Agri.	Aiken
J. W. Britt	Eng.	Abbeville
s J. E. Brodie	Agri.	Aiken
S. K. Brown	Eng.	Florence
W. D. Bryant	Eng.	Orangeburg
E. D. Buckley	Eng.	Charleston
X. O. Bunch	Eng.	Berkeley
s L. S. Burton	Agri.	Newberry
E. M. Byrd	Eng.	Darlington
J. Calhoun Caldwell	Eng.	Spartanburg
R. M. Caldwell	Agri.	Spartanburg
s D. L. Cannon	Agri.	Spartanburg
s P. Carpenter	Agri.	Greenville
H. G. Carson	Agri.	Orangeburg
J. L. Carson, Jr.	Eng.	Spartanburg

s—Scholarship Student.

NAME	COURSE	COUNTY
G. F. Cash	Eng.	Cherokee
s W. L. Clarke	Eng.	Berkeley
J. T. Cochran	Eng.	Pickens
L. M. Coleman	Eng.	Florence
M. Coles	Agri.	Jacksonville, Fla.
M. G. Cooner	Text.	Bamberg
J. E. Cottingham	Agri.	Marion
A. Covar	Eng.	Edgefield
s D. H. Covington	Agri.	Marlboro
J. M. Cox	Eng.	Greenville
W. S. Crawford	Eng.	Chester
B. A. Cromer	Eng.	Anderson
s J. C. Culler	Agri.	Orangeburg
W. H. Daniel	Eng.	Richland
F. C. Dantzler	Agri.	Berkeley
R. F. Davis	Eng.	Greenwood
T. F. Davis	Agri.	Richland
W. R. Davis	Eng.	Oconee
B. F. Dick	Eng.	Sumter
J. B. Douthit	Agri.	Anderson
A. J. Dozier	Agri.	Richland
C. K. Dunlap	Eng.	Anderson
s P. M. Dwight	Agri.	Sumter
R. E. Edwards	Eng.	Calhoun
s L. R. Elliot	Agri.	Lancaster
C. R. Emerson	Eng.	Greenwood
James Epps, Jr.	Eng.	Williamsburg
J. O. Erwin, Jr.	Eng.	Spartanburg
A. J. Evans, Jr.	Eng.	Marion
R. B. Ezell	Agri.	Spartanburg
R. W. Fant	Eng.	Anderson
s C. G. Faris	Agri.	York

s—Scholarship Student.

NAME	COURSE	COUNTY
s C. L. Faris	Agri.	York
W. C. Farmer	Agri.	Barnwell
K. N. Felder	Agri.	Orangeburg
J. A. Finken	Eng.	Cherokee
G. M. Ford	Eng.	Georgetown
s W. H. Frampton	Agri.	Charleston
s G. E. Frick	Text.	Lexington
s C. D. Fulmer	Agri.	Saluda
A. P. Gandy	Eng.	Darlington
S. A. Gandy	Agri.	Darlington
J. W. Gary	Eng.	Newberry
T. C. Gentry	Eng.	Clarendon
S. G. Gilliam	Eng.	Abbeville
W. C. Gilmore	Eng.	Union
F. A. Godman	Eng.	Saluda
L. J. Goodman	Eng.	Oconee
H. A. Hagood	Eng.	Spartanburg
A. B. Haight	Eng.	Charleston
G. W. Hairston	Eng.	Newberry
J. D. Hall	Eng.	Pickens
A. V. Hamilton	Eng.	Pickens
s J. E. Hanahan	Text.	Charleston
E. Hanvey	Eng.	Abbeville
J. A. Harper	Eng.	Abbeville
J. G. Harper	Agri.	Anderson
S. E. Harrison	Eng.	Greenville
H. H. Harvey	Agri.	Berkeley
M. Heldman	Text.	Spartanburg
A. B. Hemingway	Agri.	Williamsburg
s H. D. G. Heriot	Agri.	Lee
J. L. Hiers	Agri.	Hampton
s J. R. Hill	Agri.	Darlington

s—Scholarship Student.

NAME	COURSE	COUNTY
s F. Hodges	Agri.	Greenwood
J. H. Hollingsworth	Eng.	Edgefield
T. E. Horton	Eng.	Anderson
A. G. Huggins	Eng.	Kershaw
C. S. Hutchison	Agri.	York
s L. D. Hutson	Text.	Aiken
C. T. Hutto	Agri.	Orangeburg
A. Jackson	Eng.	Abbeville
A. C. Jenkins	Agri.	Oconee
J. W. Johnson	Eng.	Florence
I. B. Jones, Jr.	Eng.	Lancaster
J. H. Kangeter	Eng.	Charleston
E. H. Kernaghan	Eng.	Richland
P. R. Kilgo	Eng.	Florence
s C. J. King	Agri.	Lancaster
s W. T. Kyzer	Agri.	Lexington
A. H. Lachicotte	Agri.	Georgetown
W. F. Lachicotte	Eng.	Georgetown
B. T. Lanham	Eng.	Edgefield
M. S. Lawton	Eng.	Barnwell
M. A. Laney	Agri.	Charleston
s F. H. Lathrop	Agri.	Orangeburg
J. G. Leland	Eng.	Charleston
W. E. Lemmon	Agri.	Lee
S. I. Lenoir	Agri.	Sumter
A. P. Lewis	Agri.	Oconee
H. O. Lindler	Eng.	Lexington
J. R. Lomax	Agri.	Abbeville
H. R. Lucas, Jr.	Eng.	Charleston
O. L. Maddux	Eng.	Spartanburg
J. A. Magill	Agri.	Abbeville
L. H. Massey	Eng.	York

s—Scholarship Student.

NAME	COURSE	COUNTY
T. F. Massey	Eng.	York
W. H. Martin	Text.	York
W. D. Mayfield	Agri.	Bamberg
R. W. Maynard	Eng.	Anderson
T. D. McAlhany	Eng.	Dorchester
J. W. McLure, Jr.	Eng.	Union
R. E. McElveen, Jr.	Eng.	Lee
H. S. McGee	Eng.	Anderson
G. W. McIntyre	Agri.	Marlboro
E. B. McLaurin	Agri.	Marlboro
s W. G. McLeod	Agri.	Lee
G. C. McWhite	Eng.	Horry
G. A. Middleton	Text.	Charleston
H. G. Miley	Agri.	Hampton
W. M. Miller	Agri.	Florence
W. E. Morrison	Eng.	Chester
H. G. Muldrow	Eng.	Lee
W. K. Murph	Agri.	Calhoun
s P. E. Myers	Agri.	Berkeley
C. A. Newnham	Eng.	Chesterfield
G. D. Oswald	Eng.	Charleston
s H. F. Padgett	Text.	Saluda
W. W. Padgett	Agri.	Saluda
A. D. Park	Eng.	Fairfield
s C. S. Patrick	Agri.	Cherokee
s R. E. Pennell	Text.	Anderson
G. H. Pearce	Eng.	Edgefield
J. F. Pearson	Eng.	Orangeburg
s J. W. Perrin	Agri.	Lee
W. E. Plyler	Eng.	Lancaster
E. T. Provost	Eng.	York, Neb.
P. C. Quattlebaum	Eng.	Horry

s—Scholarship Student.

NAME	COURSE	COUNTY
S. W. Rabb	Eng.	Greenville
W. E. Redden	Eng.	Anderson
D. H. Reeves	Agri.	Fairfield
J. R. Renwick	Agri.	Union
s J. C. Rich	Agri.	Colleton
W. J. Rivers	Eng.	Richland
W. M. Rivers	Agri.	Hampton
A. M. Robertson	Eng.	Abbeville
F. H. Robertson	Eng.	Charleston
R. Robison	Text.	Greenville
E. S. Rogers	Agri.	Cherokee
H. G. Rogers	Agri.	Marlboro
J. F. Rogers	Eng.	Abbeville
R. C. Rowell	Eng.	Bamberg
s W. A. Rowell	Agri.	Marion
R. E. Sadler	Text.	York
A. E. Schilletter	Eng.	Oconee
W. A. Schilletter	Agri.	Oconee
J. Y. Scruggs	Eng.	York
J. L. Seal	Eng.	Greenwood
W. O. Seigler	Eng.	Greenwood
R. C. Shiver	Agri.	Oconee
H. D. Shuler	Agri.	Saluda, N. C.
J. P. Simons	Agri.	Berkeley
D. M. Sloan	Eng.	Greenville
W. L. Smarr	Agri.	York
J. M. Smith	Agri.	Anderson
L. F. Sollee	Eng.	Lexington
J. R. Sprott	Eng.	Clarendon
W. T. P. Sprott	Eng.	Clarendon
E. P. Steele	Agri.	York
H. R. Stender	Eng.	Charleston

s—Scholarship Student.

NAME	COURSE	COUNTY
F. M. Stevenson	Eng.	Anderson
C. E. Stokes	Agri.	Laurens
C. E. Stoudemire	Eng.	Lexington
W. A. Taylor	Eng.	Daderville, Ala.
s J. L. Thomas	Agri.	Chester
J. N. Todd	Eng.	Oconee
s A. C. Turbeville	Agri.	Williamsburg
S. Y. Tupper	Agri.	Charleston
R. B. Vance	Eng.	Laurens
E. P. Warren	Eng.	Colleton
R. B. Waters	Text.	York
R. N. Watkins	Agri.	Anderson
J. N. Webb	Agri.	Anderson
s T. W. Weeks	Text.	Aiken
B. A. Weinberg	Agri.	Sumter
R. H. White	Agri.	Union
W. E. Wickliffe	Eng.	Greenwood
P. Williford	Agri.	Anderson
H. F. Wilson	Agri.	Aiken
J. M. Wilson	Eng.	Lee
s M. A. Wilson	Agri.	Laurins
R. H. Wingo	Eng.	Spartanburg
s J. T. Witherspoon	Agri.	Clarendon
L. F. Wolfe	Eng.	Orangeburg
V. B. Wright	Eng.	Chester
B. F. Yeargin	Agri.	Laurens
C. P. Youmans	Agri.	Barnwell
M. D. Young	Eng.	Kershaw

Preparatory Class.

J. A. Berly.....	Newberry
B. J. Blume	Orangeburg

s—Scholarship Student.

NAME	COUNTY
K. W. Boggs	Pickens
W. L. Bowman	Abbeville
M. Burnette	Spartanburg
T. D. Chapman	Greenville
F. M. Cain	Sumter
H. L. Chaplin	Crankeburg
R. C. Chapman	Greenwood
F. M. Cobb	Greenville
R. D. Cothran	Greenville
W. Crim	Spartanburg
M. A. Dantzler	Calhoun
D. Davis	Oconee
T. Dillard	Oconee
O. M. Doyle	Pickens
J. M. Eleazer	Lexington
B. T. Gable	Abbeville
E. H. Gadsden	Birmingham, Ala.
J. S. Goodman	Oconee
T. H. Gregorie	Beaufort
J. F. Harrison	Spartanburg
P. J. Hiers	Barnwell
R. Jackson	Spartanburg
F. P. Johnson	Greenwood
J. B. Johnson	Saluda
C. R. Jones	Colleton
W. H. Kelley	Oconee
D. M. Kennedy	Abbeville
L. King	Union
A. S. Lachicotte	Georgetown
W. B. Laurence, Jr.	Pickens
S. L. Lindler	Lexington
R. Little	Union

NAME	COUNTY
E. O. Martin	Spartanburg
T. M. McKevlin	Charleston
D. L. McLure	Lee
E. S. McWhirter	Union
W. O. Merck.....	Pickens
J. E. Miley.....	Colleton
J. T. Mims.....	Edgefield
C. S. Merritte.....	York
S. P. Morrah.....	Abbeville
C. E. Neese.....	Orangeburg
H. J. Nettles.....	Darlington
M. K. Pegues.....	Marlboro
H. B. Ponds.....	Colleton
W. E. Pridmore.....	Cherokee
L. M. Ragsdale.....	Chester
A. F. Sanders.....	Spartanburg
E. R. Shanklin.....	Oconee
G. C. Shirley.....	Anderson
C. O. Smith.....	Spartanburg
G. W. Smith.....	Anderson
W. W. Smith.....	Pickens
E. E. Stevens.....	Berkeley
G. D. Varn.....	Colleton
J. D. Verner, Jr.....	Oconee
W. M. Walker.....	Greenville
A. H. Ward.....	Florence
C. T. Weston.....	Richland
E. W. Whetstone.....	Calhoun
F. W. Whitten.....	Oconee
F. M. Williams.....	Greenville
L. H. Wilson.....	Abbeville
J. C. Woods.....	Laurens
J. T. Zeigler.....	Orangeburg

Two-Year Course Textile Students.

NAME	COUNTY
G. H. Anderson	Chester
E. S. Cunningham	Laurens
G. A. Hamrick	Richland
M. M. Roddey	Chester
J. A. Teague	Oconee
J. Wingard	Lexington

Students in Cotton Grading.

G. L. Bell	Aiken
W. M. Crenshaw	Anderson
R. E. Watkins	Anderson

Irregular Students.

T. L. Alford	Text.	Marion
F. W. Chapman	Mech. & Elec. Eng.	Newberry
J. H. Earle	Civil Eng.	Pickens
G. C. Furtick	Mech. & Elec. Eng.	Calhoun
F. L. Gandy	Agri. I.	Darlington
H. L. Gandy	Agri.	Darlington
J. E. Kirby	Civil Eng.	Spartanburg
R. W. Lowery	Mech. & Elec. Eng.	Oconee
F. O. McCown	Mech. & Elec. Eng.	Anderson
J. T. Stephenson	Mech. & Elec. Eng.	Oconee
E. L. Sumner	Chem. & Geol.	Darlington
J. M. Wylie	Civil Eng.	York

Special Students.

K. Nims	Agri.	York
J. E. Redden	Civil. Eng.	Anderson

SUMMARIES.

By Classes.

Seniors	73
Juniors	95
Sophomores	169
Freshman	226
Preparatory	67
Special	2
Short Course Textile	6
Irregular	12
Students in Cotton Grading	3
Total	653

By States.

South Carolina	645
Georgia	2
North Carolina	2
Florida	1
Alabama	2
Nebraska	1
Total	653

By Counties in South Carolina.

Abbeville	33
Aiken	10
Anderson	42
Bamberg	9
Barnwell	16
Beaufort	2
Berkeley	12
Calhoun	10
Charleston	40
Cherokee	13

Chester.....	16
Chesterfield.....	4
Clarendon.....	7
Colleton.....	13
Darlington.....	21
Dorchester.....	4
Edgefield.....	7
Fairfield.....	9
Florence.....	17
Georgetown.....	8
Greenville.....	26
Greenwood.....	21
Hampton.....	9
Horry.....	5
Kershaw.....	8
Lancaster.....	8
Laurens.....	13
Lee.....	11
Lexington.....	18
Marion.....	11
Marlboro.....	14
Newberry.....	11
Oconee.....	28
Orangeburg.....	27
Pickens.....	21
Richland.....	13
Saluda.....	9
Spartanburg.....	39
Sumter.....	14
Union.....	15
Williamsburg.....	7
York.....	24
Total, South Carolina.....	645

INDEX.

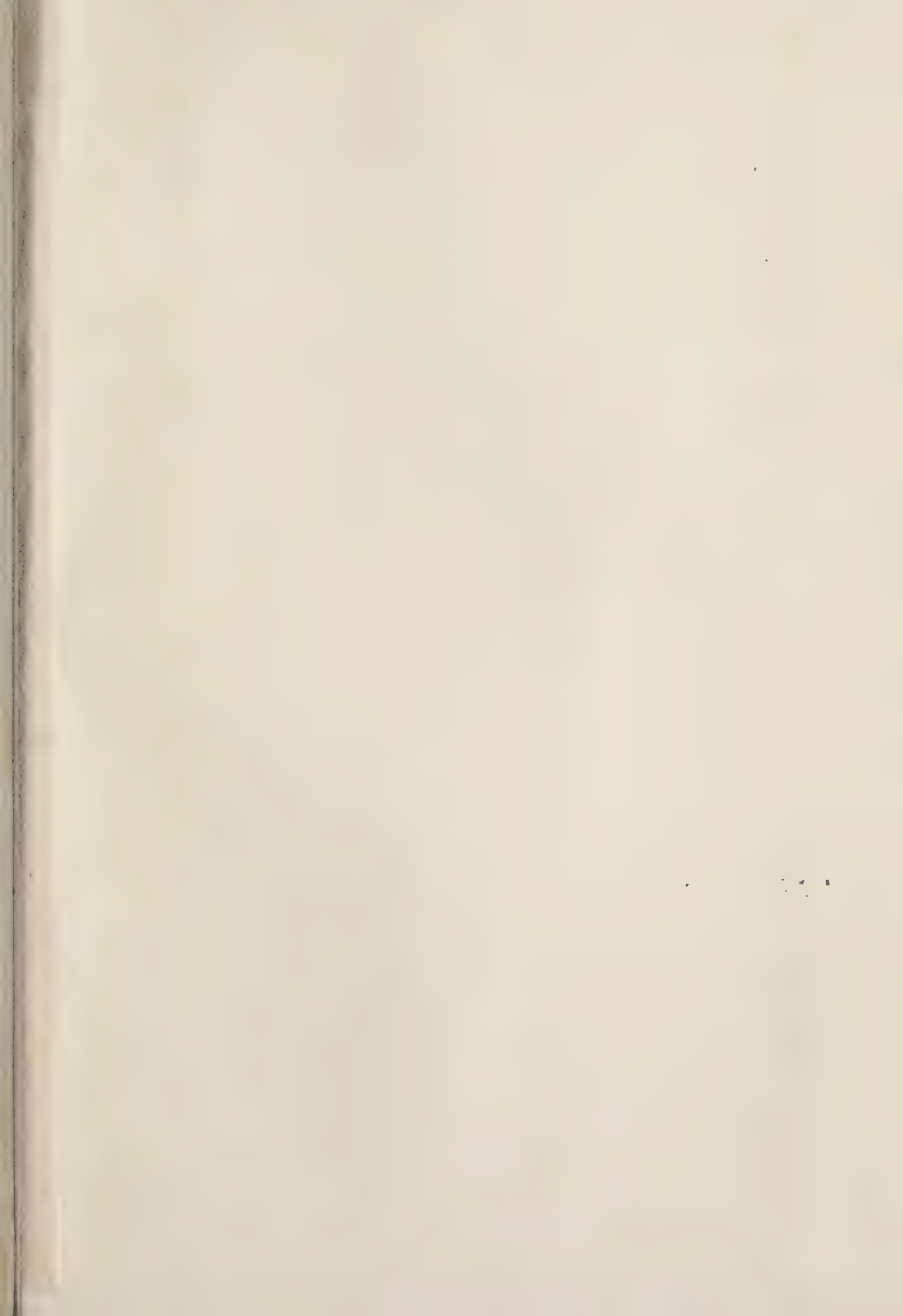
	PAGE
Admission of students	74
Admission to advanced standing	78
Admission to freshman class	77
Admission to preparatory class	78
Admission to state scholarship	24, 78, 81
Agricultural buildings	32
Agricultural buildings and equipment	34
Agriculture courses	84, 86, 88, 102
Agricultural equipment	32
Agricultural experiment station	132
Agricultural instruction	109
Agriculture, short course	102
Agronomy	109
Alumni association	141
Animal husbandry and dairying equipment	36
Animal husbandry and dairying instruction	114
Animal industry and agriculture course	86
Assets	26
Athletics	72
Bacteriology instruction	113
Band	26
Barns	33
Barracks	29
Biological club	71
Board of Trustees	4
Board of visitors	4, 5
Bookkeeping	135
Botany and forestry instruction	115
Care of the sick	68
Calendar	3
Calhoun Mansion	57
Calhoun relics	57
Cannery	32
Campus	29
Carding and spinning equipment	51
Carding and spinning instruction	128
Chapel services	66

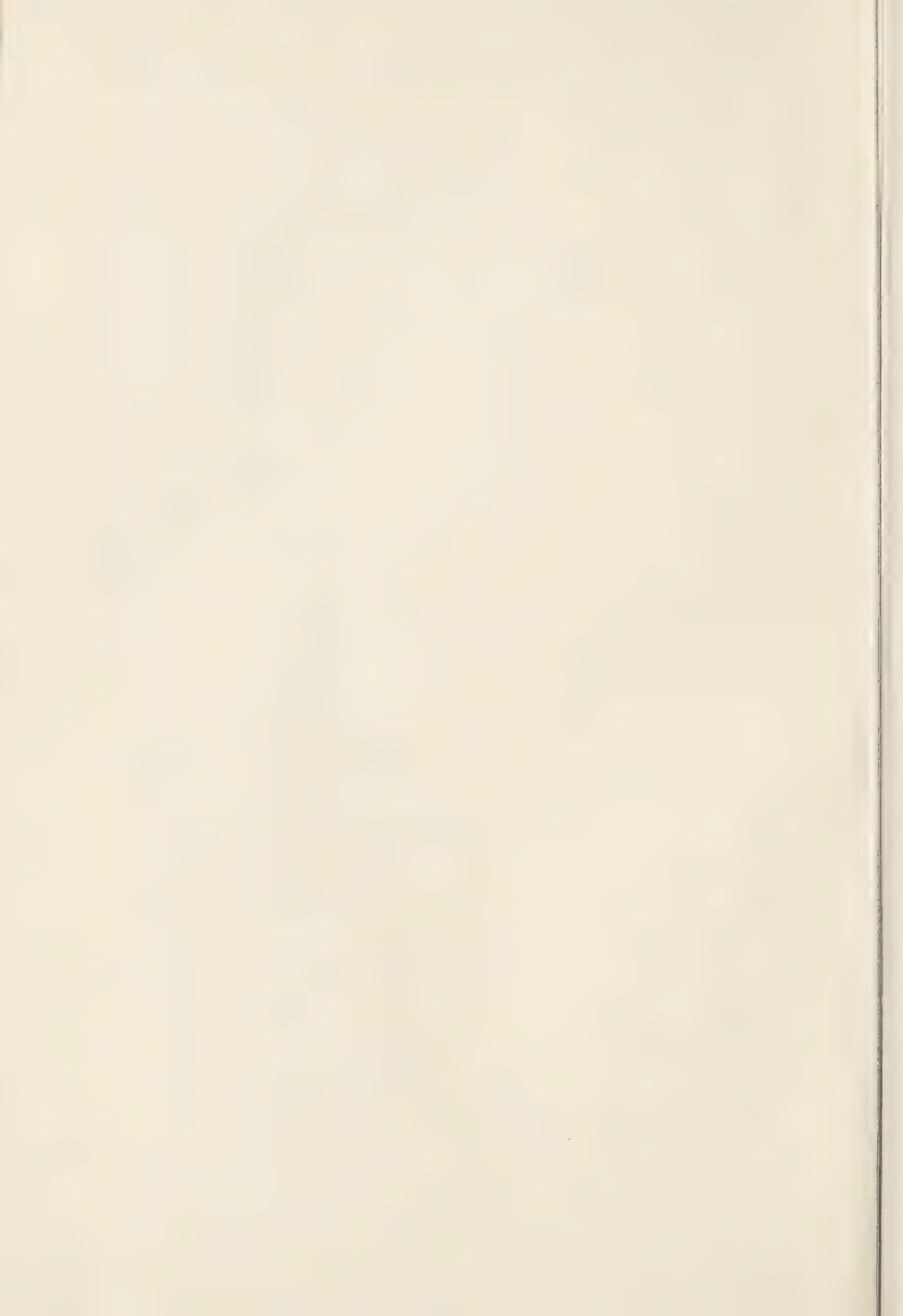
	PAGE
Chemical building and equipment.....	49
Chemical department	126
Chemistry and agriculture course.....	88
Chemistry and geology course	90
Chemistry and metallurgy instruction	126
Civil engineering course.....	94
Civil engineering equipment.....	43
Civil engineering instruction	119
Cotton grading course... ..	99
Clemson relics.....	57
College institutions	66
Committees to the President	11
County apportionment.....	83
Correspondence course in agriculture.....	39
Course I. Agriculture.....	84, 85
Course II. Agriculture and Animal Industry	86, 87
Course III. Agriculture and Chemistry.....	88, 89
Course IV. Chemistry and Geology.....	90, 91
Course V. Mechanical and Electrical Engineering.....	92, 93
Course VI. Civil Engineering.....	94, 95
Course VII. Textile Industry.....	96, 97
Courses of study.....	74, 108
Dairying and animal husbandry.....	36
Dairy building.....	33
Dairying instruction.....	114
Departments of the College	58
Description of courses of instruction.....	108-137
Drawing and designing equipment ..	44
Drawing and designing instruction	122
Dyeing and textile chemistry equipment.....	54
Engineering buildings and equipment	39
Engineering department.....	117
Electrical engineering equipment.....	41
Electrical engineering instruction.....	117
Electrical and mechanical engineering course.....	92
English instruction.....	132
Entomology instruction.....	113
Entomology and zoology equipment	36
Entrance examinations.....	77

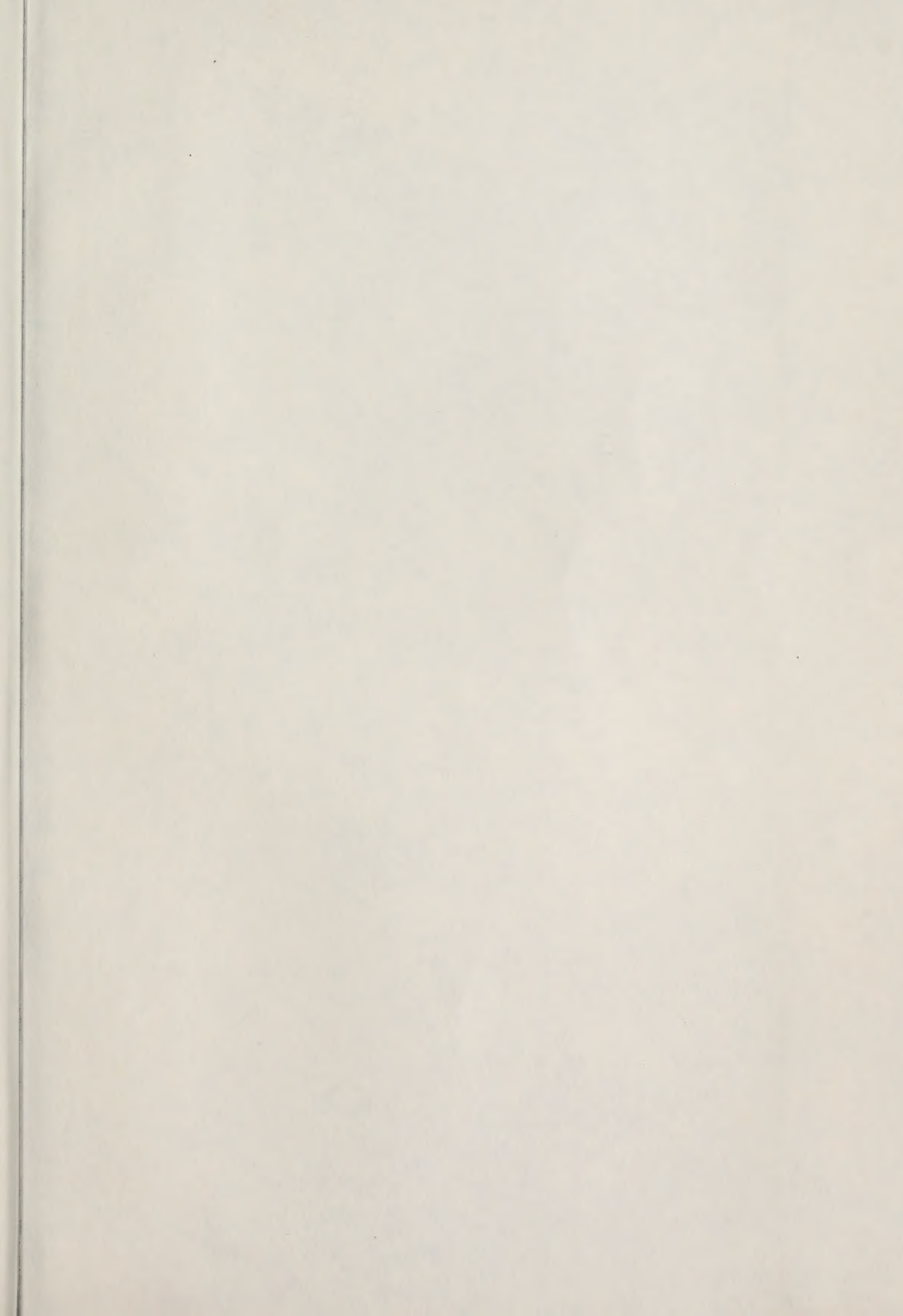
	PAGE
Entrance requirements.....	75
Equipment	29
Exchange.....	72
Expenditures	26, 28
Expenses and fees	79
Experiment station	12, 138
Experiment station staff	12
Extension work	12
Extension work and farmers' institutes	37
Extension work staff.....	12
Farm	29
Farm buildings.....	33
Farmers' institutes.....	39
Farmers' institute staff.....	12
Farmers' institutes and extension work	37
Fertilizer control.....	13
Fertilizer inspection office.....	55
Fees and expenses.....	79
Forestry instruction.....	115
Forge and foundry equipment.....	45
Forge and foundry instruction.....	123
Free tuition.....	80
French	136
General regulations.....	62
Geology and chemistry course.....	90
Geology instruction.....	110
Geology and mineralogy equipment.....	34
German	136
Grades and reports.....	3, 64
Graduates 1909, list of.....	142
Greenhouses.....	32
Grounds and buildings.....	29
Gymnasium	55
Heating plant.....	31
Historical sketch.....	17
History and political economy instruction.....	133
Horticultural grounds.....	32
Horticulture instruction.....	111
Honors, medals and degrees.....	105

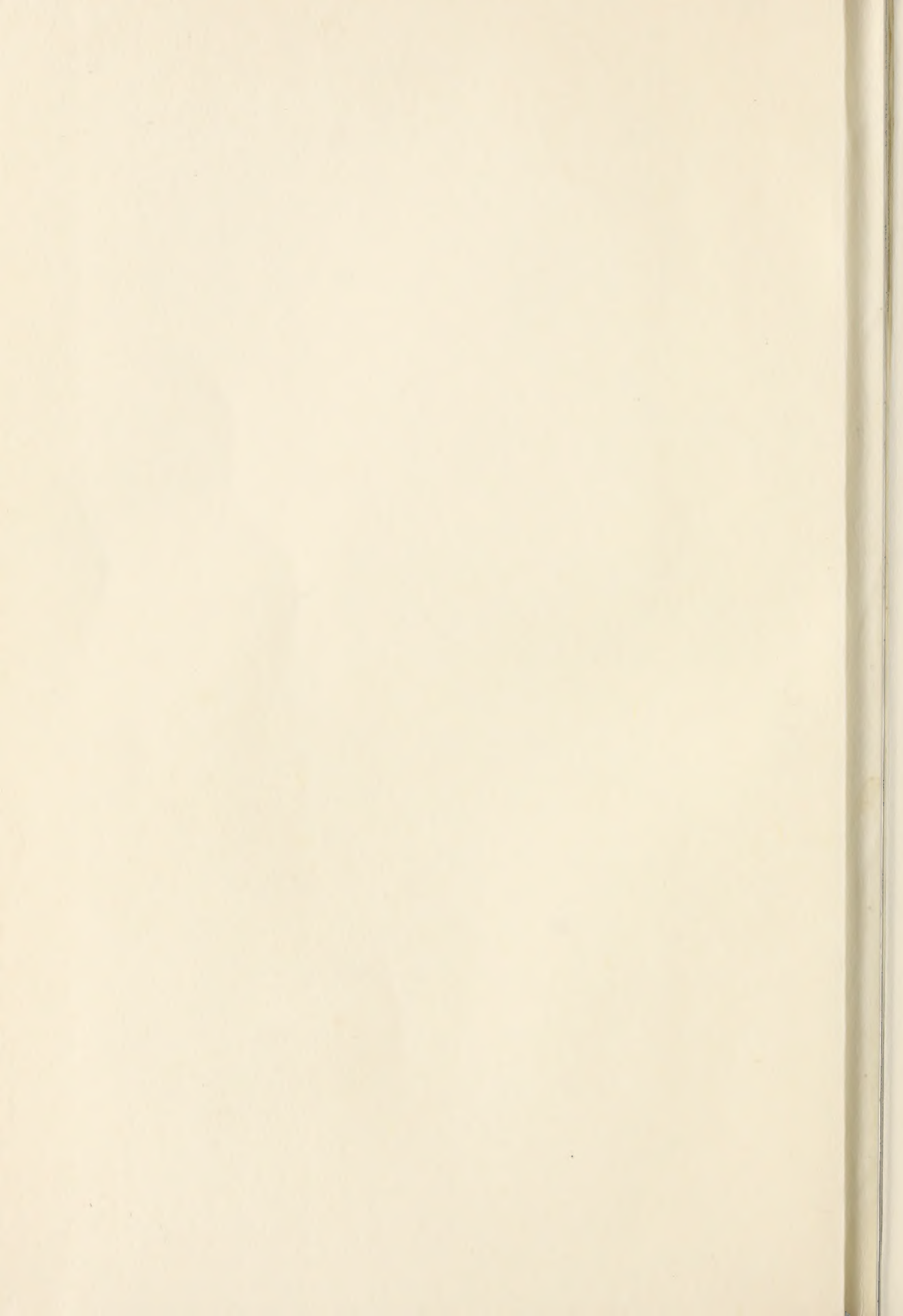
	PAGE
Hospital	56
Hotel	57
Income	26
Irregular courses	103
Laundry	56
Leave of absence	61
Lecture course	71
Library	56
Light and heat	31
Literary societies	69
Location of the college	29
Machine shop equipment	46
Machine shop instruction	124
Main building	29
Mathematics	134
Mechanical engineering equipment	39
Mechanical engineering instruction	118
Mechanical and electrical engineering course	92
Medals, degrees and honors	105
Metallurgy instruction	127
Military organization and mode of government	14, 60
Military science and tactics	132
Mineralogy instruction	110
Ministers	13
Modern languages	136
Museum	56
Officers, administrative	6
Officers of instruction	7
Organization and government of the college	59
Physics equipment	44
Physics instruction	121
Political economy and history instruction	133
Post Office	55
Power station	31
Preparatory courses	104
Prescribed courses of study	83
Printery equipment	55
Promotion	65
Publications by students	70

	PAGE
Quarterly dues.....	3, 79
Re-examination and promotion.....	65
Regimental organization.....	14
Regulations, general.....	62
Religious exercises.....	66
Reports and grades.....	3, 64
Reports to parents.....	3
Requirements for entrance.....	75
Residences.....	57
Science club.....	71
Sewer system.....	30
Soil physics equipment.....	35
Special courses.....	98
Special students.....	165
State oratorical contest.....	70
State scholarships.....	24, 80, 81
Students, candidates for a degree.....	145
Student labor.....	69
Summaries by classes, counties and states.....	166
Sunday school.....	67
Textile building and equipment.....	50
Textile chemistry and dyeing equipment.....	54
Textile chemistry and dyeing instruction.....	131
Textile industry courses.....	96, 99, 100, 102
Textile industry instruction.....	128
Veterinary hospital.....	32
Veterinary instruction.....	112
Veterinary science equipment.....	36
Water supply.....	30
Weaving equipment.....	52
Weaving and designing instruction.....	130
Woodwork equipment.....	47
Woodwork instruction.....	125
Young Men's Christian Association.....	67
Zoology and entomology equipment.....	36
Zoology, entomology and bacteriology instruction.....	131









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